

SOUTHERN TEXTILE BULLETIN

VOL. XXIV.

CHARLOTTE, N. C., THURSDAY, NOVEMBER 9, 1922.

NUMBER 11

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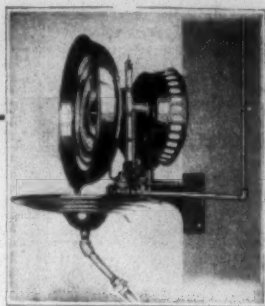
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SOUTHERN TEXTILE BULLETIN

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The Business Cycle

(By Prof. Charles J. Bullock, before the National Association of Cotton Spinners.)

Successful business concerns in the course of years accumulate a wealth of experience which in time becomes crystallized in principles that control their general policies. Such principles are sometimes known as "rules of thumb," a name which carries the unfortunate connotation that they are not derived from intelligent observation of the mutations of human affairs and do not embody the results of long experience, much of it dearly purchased, and most of it valuable as a basis for judging current events. They are sometimes lightly regarded by a new management, and, of course, they are anathema to efficiency engineers of a certain type. Infalible, indeed, they are not. Some of them may be survivals of conditions that have passed away, and may therefore be inapplicable to present problems. Like everything that we inherit from the past, they are doubtless imperfect in some respects and therefore should be modified whenever investigation and reflection demonstrate the need of change. But in a general way they are of great worth, and should be regarded as among the most valuable intangible assets of a business organization.

The study of the rules or principles upon which successful concerns base their business policies is a subject of fascinating interest, and is receiving the attention of certain trade organizations which have persuaded members to pool their experience. In this direction enough has been done to show that important results can be obtained, and it is to be expected that much more can and will be accomplished. This evening, it is my purpose to speak of only one of the "rules of thumb"—I should prefer to say maxims of business prudence—a rule so familiar as to be commonplace, but so often disregarded in critical times as to be honored rather in the breach than the observance. I refer to the timeworn rule, upon observance of which the survival of a company often depends, that business is subject to alternating periods of prosperity and depression, and must shape its policies accordingly.

Some of the vicissitudes which business encounters are due to abnormal factors such as war or poli-

tical upheavals, and are therefore unpredictable.

The fluctuations in business conditions which I propose to discuss are those that result from what economists call the business cycle. Upon this subject there are many theories—almost as many as there are economists—but alternations of prosperity and depression are nevertheless an inescapable fact. The duration of business cycles has been differently estimated, and conceivably may not be the same in every country. Some of them are much more violent in their movements than others; and upon this fact is based a theory that we have a major crisis about once in every twenty-years and intermediate crisis of less severity and minor importance. Upon the basis of our present knowledge, however, it is safe to say nothing more than that in the United States the length of the ordinary business cycle is from three to four years, and that some cycles are marked by much more violent fluctuations than others.

This statement accords with the "rule of thumb" upon which some successful executives have long operated, that in every decade there will be three or four bad years and three or four good ones, the remainder being years in which, with an even break of luck, it is possible to earn just about the amount required for regular dividends. It is obvious that ten years is approximately the average time required for the completion of three business cycles; and it follows from this that in every decade three good years and three bad ones may confidently be expected, while the remaining years will be more or less favorable according to the intensity of the booms and the severity of the depressions.

Five years ago the Harvard University Committee on Economic Research undertook the systematic study of general business conditions, and the investigations conducted by their statistician, Professor Warren M. Persons, have already resulted in a substantial addition to our knowledge of the nature of business cycles. The first step in the work was the collection and critical examination of the available statistics relating to production, trade, speculation, and finance in the United States, with a view to determining their reliability and their value as indices of business conditions. From the mass of data Professor Persons

finally selected about a score of statistical series which were sufficiently accurate and were available for a considerable period of years. Each series was then studied with a view to determining whether the monthly data were subject to definite seasonal variations and whether the figures for a series of years were subject to long run trends. Some of the series, like those relating to bank clearings and money rates, were found to have a very definite and marked seasonal movement which could be determined, and, by an ingenious method of correction, eliminated from the data so that the figures for any month could be presented in a form that made due allowance for the known seasonal variation.

Long-run trends, both upward and downward, were found in some of the series resulting from the growth of the country, the upward or downward trend of commodity prices, and other similar factors. These trends were then eliminated from the series wherever practicable, with the result that after making this second correction the data reflected very accurately the ups and downs of business activity.

The most important result of this investigation was that the different series of statistics not only recorded the same fluctuations of prosperity and depression, but seemed to have maintained, during the entire period studied, certain definite relations to each other. One group of series, all of them reflecting speculative activity, downward swings the movement of the others, and preceded them by an interval that would have been sufficient to enable a statistician to make a useful forecast. A second group of series could also be distinguished, all of them relating to commodity prices and business activity, which preceded by a definite interval the movements of the third group, during the entire period, uniformly lagged behind the second. This third group turned out to consist entirely of statistical series relating to money rates and banking conditions, so that it can be regarded as reflecting the movements of the money market.

Except when such untoward developments as the outbreak of the Great War had intervened, both speculative and business activity continued on a high level until the increasing demands for money which they occasioned brought about a substantial increase in money rates. In

the end the result had always been the same. After a sufficient interval money had always risen to such a high level that liquidation began in security markets and "bull movements" came to an inglorious end. Ordinarily business activity was not affected by such developments, and continued on a high level for several months; but money continuing to rise, liquidation in commodity markets presently ensued, and business followed speculation down from the mountain top of prosperity into the valley of depression. Finally, after liquidation in both security and commodity markets had sufficiently relieved the tension, money rates softened and the money curve turned downward into the valley where speculation and business had already preceded it. Obviously, if history might be expected to repeat itself, a chart recording the current movements of speculation, business, and money might be expected to afford a reliable basis for forecasting future movements of the business cycle.

But here there was naturally and inevitably an element of doubt. Europe and the United States were emerging from the Great War, which had strained western civilization almost to the breaking point and produced conditions so abnormal that it was reasonable to suppose that pre-war experience would be of little value and might prove utterly misleading. It is needless to recount the different reasons that could be advanced plausibly in support of the proposition that business conditions in December, 1918, were so abnormal that the pre-war relationships between speculation, business, and money could not be expected to obtain.

The event proved that, in spite of all the reasons that could be adduced to the contrary, business in the United States resumed its pre-war cyclical movement; and between the end of 1918 and the middle of 1921 passed through a characteristic business cycle which differed from those studied before the war only by reason of the facts that the upward and downward movements were more violent, and the time required for the completion of the cycle was somewhat shorter than in the more normal period preceding the war. After a short-lived depression following the armistice, speculative activity in the spring of 1919 revived to a marked degree, and the upward swing of our speculative

(Continued on Page 24.)

Development of Electric Drive for Mills

(By C. N. Johnson, General Engineer, Westinghouse Electric & Mfg. Co.)

Any record of the development of electric drives for Cotton Mills must from nature of things record largely the successful application of an individual motor to each separate machine. These developments constitute the most important advance in cotton mill practice in the past decade. Progress has been gradual but each year records valuable work along constructive lines.

With something over two million primary horsepower required to drive the cotton mills in the United States, records show that over one million horsepower is electric. Whereas, the total primary horsepower has roughly doubled in 20 years the electric horsepower has increased more than 20 times. Accepted engineering practice of even ten years ago produced a mill largely group driven with motor sizes averaging from twenty to fifty horsepower. Modern mills require a larger number of smaller motors, whose average size range from one to ten horsepower.

The majority of applications use a squirrel cage type alternating current constant speed motor, the electrical and mechanical characteristics of which are varied on the driven machine this can very often be taken care of in the connection between motor and machine. Where an adjustable speed source of power is required the wound rotary type alternating current motor with external resistance and controller, or the commutator type alternating current motor with moving brush arms may be used for small speed changes. Where more than one hundred per cent increase from the low speed is required the direct current motor provides the most desirable driving unit. This latter condition applies almost entirely in finishing plants. Each application must be worked out to perform a given operation more satisfactorily than belted drive.

The processes through which cotton passes from the bale to the finished product, requires certain types of machines which have become more or less standardized. The application of individual motor drives to many of the machines involved has been a comparatively easy task. Where difficulties were encountered, they were in many cases mechanical, it being necessary to embody special mechanical features in the motor used or to change certain mechanical features of the driven machine slightly in order to more readily take advantage of the benefit derived from motor drive. A brief description of some of the more important processes with a description of the motor drives used, may be of interest.

Openers and Pickers.

The preliminary operations of loosening the cotton fibres and cleaning, are taken care of in openers and pickers. The openers may be driven by small constant speed motors directly geared or belted to

the driven shaft. On openers where the driven shaft is vertical, a vertical type of motor may be used with motor shaft directly coupled to the shaft of the machine. This application has been made with very satisfactory results.

For pickers, consisting of one or more beater cylinders running at high speed with necessary condensers, etc., a belted type of drive has been universally adopted. The motor for driving the machine is mounted on what is technically called an "A" frame, which brings the shaft of the motor about six feet above the shaft of the beater cylinder. A standard 4 pole textile type motor with waste packed bearings and screens is used. There the machine has more than one beater shaft to be driven the most desirable drive provides a motor for each cylinder as shown in Figure 1. It has been the practice to provide a single motor to drive two cylinders the motor having a shaft extended across the full width of the beater. This gave a rather unsatisfactory mechanical layout, and meant the use of a special motor.

Some years ago, a motor was developed for direct connecting to the shaft of the beater cylinder. This application required a considerable modification of mechanical details, the rotor of the motor being mounted directly on the beater shaft, and the bearings of the motor were omitted entirely. The operation of this drive proved to be entirely satisfactory, but from the commercial standpoint, it was found that the increased cost of the electrical equipment was hardly justified by advantages to the mill as against the cost of the belted equipment noted above. One objection also was that the speed of the beater was limited to that of the normal speed of the direct connected motor in this case, being slightly under 1,200 R. P. M.

Cards.

The accepted method for driving cards has been, up to the present time, to use group drives. The power required to drive each card is only slightly more or less than 2 H. P., depending on the amount of material being handled by the cards. As compared to the amount of power taken to operate the card when in motion, the starting requirement is rather large, due to the heavy cylinder which must be brought up to speed. In addition to this, there are two operations to be performed on the card, outside of the regular carding process, which have presented mechanical difficulties. About twice each day it is necessary to remove the short fibres of cotton which have become imbedded in the clothing on the main roll and on the doffer roll. This process is called "stripping" and on the older cards is taken care of by a small stripper roll running at high speed, and placed against either the main cylinder or the doffer cylinder. One rotation of either of the large cylinder is all that is necessary to clean or strip the clothing. For this process,

it is necessary to provide some means for driving the small stripper roll. This method of stripping has been eliminated on many of the newer cards where the so-called "vacuum stripper" is applied. Provision must also be made for grinding the card clothing. To do this, the main cylinder is brought up to speed in the reverse direction, and the grinding is done by a high speed emery roll running against the cylinder. For this grinding, therefore, it is necessary to reverse the direction of rotation of the main cylinder, and also to provide a method for driving the emery grinding roll.

In the first place, it was necessary to determine by test, exactly the size and characteristics of the motor which would satisfactorily start and run the card cylinder without using a motor which would give poor electrical characteristics while running. With this accomplished, it was then necessary to solve in some manner, the mechanical problem of taking care of stripping and grinding. Individual drive has been successfully applied to three makes of cards with slight variations in the method used.

In all cases, a motor, acquired cage type, with normal rating of 1 1/4 H. P. has been mounted on a bracket attached to the present driven side of the card frame. Drive from the motor the card cylinder shaft has been taken care of in one case through standard spur gears and in the other two types, through the use of silent chain drive. The machine is brought up to speed in approximately 15 seconds, being started by an ordinary snap switch.

On one installation a separate special motor is provided directly geared to the stripper roll. For stripping, then, it is only necessary to start the card turning slowly, and then start the motor on the stripper roll. Provision is made for operating the small stripper motor from the same outlet as the larger driving motor. On the other two installations, the main driving motor shaft is extended on both ends; the end opposite the main drive carries 2-grooved pulleys from which the stripper roll is operated. Provision is made in the starting switch, for reversing the card motor on cylinder for grinding. The grinding roll is driven in the same manner as the stripper.

Combers.

On better classes of yarn where combers are used, individual motor drives have been found to be very desirable. A constant speed motor is all that is required, this to be mounted on a bracket at the end of the comber, and geared or chain driven to the shaft of the comber. Throwing the motor directly across the line will start the machine without damage to the comber or the yarn.

Roving.

The various types of roving frames may be driven with an individual constant speed motor very satisfactorily. The drive from

motors to machines can be made either through gears or silent chains. If care is exercised in selecting the proper sized motor the individual drive will be found to be a very great improvement over the former belted drive from overhead line shaft.

Spinning and Twisting.

Two types of individual motor drives are in use on spinning frames and twisters. In one case, the rotating part of the motor is directly connected to the drum of the spinning frame. In the other method of drive, gears or silent chains are used to transmit power from the motor to the frame.

Where one speed only is required, it is possible to use standard constant speed motors directly connected to the cylinder of the machine. A great many of these drives are in operation on spinning frames.

A variable speed motor direct coupled to the cylinder may be substituted for the constant speed motor and, in this way, take care of the spinning of different counts of yarn on the frame, and also may be used to compensate for varying yarn and air conditions. The adjustable speed motor for this work has many advantages, but from the mill standpoint there are some disadvantages especially where the commutator type of adjustable speed motor is used. These objections to the commutator type of adjustable speed motor is used. These objections to the commutator motor have resulted in very little use of this type of drive in the United States. It has been found that the wound rotor motor with collector rings entirely enclosed and secondary resistance and controller provided, will operate very satisfactorily on this service and this drive will undoubtedly be used to a larger extent in the future.

By far the larger number of individually driven spinning and twister frames use a constant speed motor either geared or chained to the cylinder of the machine. The development of the silent chain has made this type of drive entirely practical and, as stated above, this form of drive is now the most popular.

Gear drive between motor and cylinder has been tried on heavy twistings with varying success. On this work, the service is extremely severe, both for the motor and for the gears. As in all mechanical drives, it is absolutely necessary that the motor be mounted on a bracket integral with, or forming a part of the machine frame, so that there is no chance for misalignment between the motor shaft and the driven shaft of the machine. Where trouble has been experienced on the mechanical drive, a thorough investigation has found that the trouble, in a majority of the cases, has been caused by unsatisfactory mounting or by poor design for the mechanical drive, whether gear or chain.

Individual motor drive on looms

(Continued on Page 12.)



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Mill Men Heavily Fined for Income Tax Evasion.

Greenville, S. C.—Henry Rutledge Buist and Ashmead Courtenay of Charleston and St. John Courtenay and Campbell Courtenay of Columbia pleaded guilty in the United States district court here to indictments charging attempt to defeat and evade federal income taxes.

These cases arose out of the sale in 1920, for \$1,200,000 of the Courtenay Manufacturing company, operating mills at Newry, Oconee county, and in which the defendants were principal stockholders, to the Issaquena Mills company, and a civil action brought by the purchasers.

Judge H. H. Watkins imposed sentences as follows:

Henry Rutledge Buist, \$3,000 fine or four months in jail; Ashmead Courtenay, \$3,000 fine or four months in jail; St. John Courtenay, \$10,000 fine or eight months in jail; Campbell Courtenay, \$5,000 fine or four months in jail, under each of two indictments.

The fines were paid at once.

An indictment against Campbell Courtenay, St. John Courtenay, Henry Rutledge Buist, Francis J. Pelzer and Edwin P. Frost, charging conspiracy, was not pressed. An offer in settlement has been accepted from Mr. Frost, on account of the state of his health. Mr. Pelzer has already made certain payments and an offer of a further sum in lieu of prosecution is under consideration by the government.

Additional individual income taxes and ad valorem penalties have been assessed against St. John Courtenay

of \$184,134.58 and against Campbell Courtenay of \$194,928.58, and these have not been paid; but sworn statements have been filed by these defendants showing their net worth and the government will grant them a reasonable time in which to make offers of settlement of their tax liabilities on an insolvency basis.

Investigations of the income tax returns of the various taxpayers, which led to the institution of criminal proceedings, have been in progress for more than a year, under the direction of John M. Roberts, internal revenue agent in charge for South Carolina.

The indictment to which Mr. Buist pleaded guilty charged him with having attempted to defeat and evade income taxes on his individual income for the year 1920. The indictment alleged that Mr. Buist became liable to pay \$19,310.88 by reason of the fact that he had received as income during 1920, among other sums, the sum of \$69,966.68, as profit on the sale by him during that year of 140 shares of the Courtenay Manufacturing company stock, and that in making his income tax return, he wilfully omitted to include the total amount of the profit, but reported a profit of \$31,745.63.

The indictment to which Ashmead Courtenay pleaded guilty charged that he became liable to pay the sum of \$41,029.02 as income tax for the year 1920 by reason of the fact that he had received as income during that year, among other sums, the sum of \$128,818.75, as a profit on the sale during 1920 of 265 shares of Courtenay Manufacturing company stock, and that he wilfully

omitted to return the total amount of said profit in his income tax return and reported only a profit of \$57,000.

The indictment to which St. John Courtenay pleaded guilty charged that he wilfully attempted to defeat and evade the income tax on his income for the calendar year 1919 by reason of the fact that he failed to return a profit of \$38,539.00 received during 1919 for the sale of various stocks and reported in his income tax returns that he had received no profits from the sale of stocks during that year.

Mill Records Altered.

One of the two indictments to which Campbell Courtenay pleaded guilty charged that he wilfully attempted to defeat and evade a tax of \$2,630 on his income for the year 1919 by failing to return in his income tax return a profit of \$3,827.85 on the sale of Victor-Monaghan company stock, in that he reported in said return that he had received no profit from the sale of stocks during that year. The other indictment to which Campbell Courtenay pleaded guilty charged that as president and treasurer of the Courtenay Manufacturing company he wilfully attempted to defeat and evade the income war profits and excess profits taxes on the net income of the corporation for the calendar year 1918, by altering and causing to be altered the books of account records and papers of the Courtenay Manufacturing company in changing and raising and causing to be changed and raised the true price and costs paid by the company for cotton consumed in manufacturing

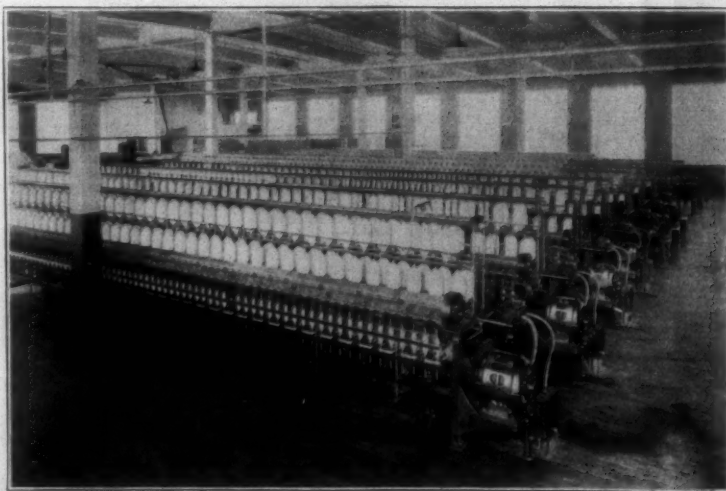
during 1918, to a higher price and cost, so that the books of the corporation, when so altered, showed a false and fictitious price in the cotton consumed in manufacturing and thereby concealed the true and actual costs to the corporation of the cotton consumed during 1918, and thereby making the income, war profits and excess profits earned appear from the books to be far less than they actually were; that the net income shown by the books after the alteration was \$297,140, which was returned in the corporation tax returns as the total net income for that year, when the true and actual net income of the corporation was \$400,303.00; that as president and treasurer of the corporation, Mr. Courtenay paid for said corporation a tax of \$185,151.98, based upon the changed books of account, when he should have paid a tax of \$266,000.

Henry Rutledge Buist, upon his plea of guilty, was fined \$3,000 or four months in jail, having therefore paid to the collector of internal revenue additional taxes and ad valorem penalty in the sum of \$21,780.58.

Ashmead Courtenay was fined \$3,000 or four months in jail, having therefore paid to the collector as additional taxes (income) and ad valorem penalty the sum of \$51,373.83.

The former stockholders of the Courtenay Manufacturing Company have paid to the collector, as additional taxes (income) and ad valorem penalty for 1918 and prior years, \$128,505.53, which taxes and penalties were paid without protest.

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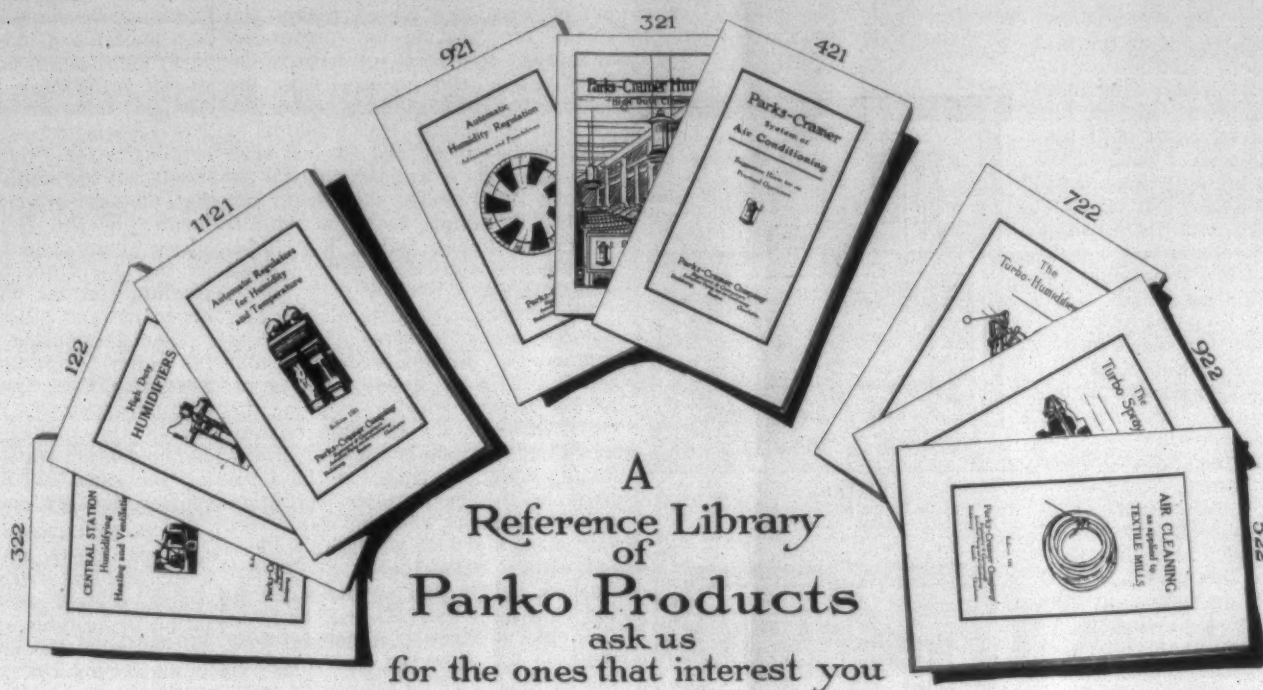
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Carbonization.

When the goods begin to get near the finishing department of the mill the superintendent will notice the presence of such foreign substances in the cloth as burrs, specks, bits of seeds, pieces of straw and kindred matter which have escaped the operations thus far and cling to the texture. These specks are very difficult to remove. In the finishing department minute specks are withdrawn with tweezers is possible and if this cannot be done a little application of dye on the point of a stick or brush will cover the speck so that it cannot be seen, but it is still there. When the goods are manufactured of animal fiber, or part animal and part vegetable fiber, the process of removing the foreign substances that cause specks is accomplished by carbonization. That part of the stock which is composed of cotton or other vegetable fiber is not treated by this process as the fiber would be destroyed by the chemicals employed in the liquid bath used to carbonize the pieces of burrs, sticks, seeds, straws, etc. But that part of the stock composed of wool, worsted, silk, mohair, alpaca, cashmere, or woolen shoddy or mungo can be treated with the process of carbonization without detriment to the staple unless an error is made in the use of the carbolic or muriatic acids or the stock raised to a too high temperature during the bath and the baking. The actual removal of the impurities involves chemically decomposing them with acids, following this up with drying in a high temperature.

Chloride of aluminum, chloride of magnesium, acid vapors, and salt solutions accomplish the decomposing of the vegetable matter in the lot without injuring the animal staple. After the stock under treatment has been subjected to the action of the acid bath it is put in to baking apartments where the intense heat turns the acid impregnated vegetable matter into carbon. This latter material can be shaken out of the staple of the stock in the form of dust.

An ordinary tank is often used for the bath. Sometimes when a small lot is to be treated an empty oil barrel is used. But in mills requiring to treat considerable quantities of stock for the removal of burry substances, a tank is constructed as shown in the sectional view Figure 1. The metal tank stands in a concrete, brick or stone form and is provided with a false bottom D for retaining the settled liquid. The stock is designated A. The two upper drums B and C contain the acids. The loose stock is placed in the tank and the diluted sulphuric acid solution is run in. This solution is regulated to be about 6 degrees B in strength. If greater strength is used there is danger of injury to the staple. The stock is allowed to remain over night in the bath and it is then put through the hydro-ex-

tractor to remove the liquid. Or it may be run through any type of squeeze rolls for this purpose. With the removal of the water from the stock the acid begins to exert itself

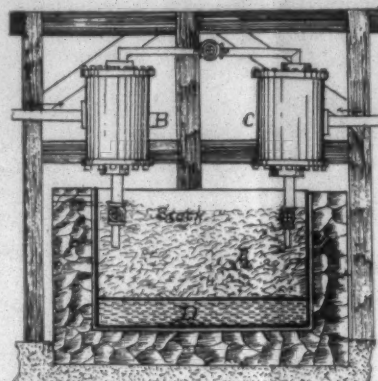


Fig 1

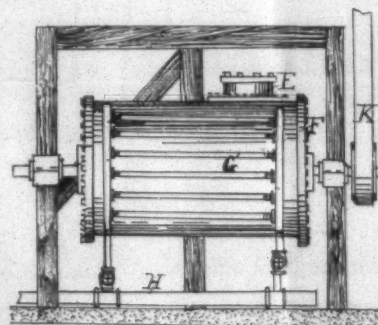


Fig 2

on the oxygen and hydrogen in the vegetable matter, allowing the carbon to remain.

The baking apparatus is constructed in several ways. Sometimes a room is used in which the acid-impregnated stock is placed on a platform and arranged so that the heat introduced through pipes or by interior stoves will thoroughly bake the stock. The heat in the dry room is usually fixed at a temperature of 240 degrees to 260 degrees F. If the heat is not powerful enough there will not be a thorough carbonization of the foreign matter. If it is too strong, the cellular construction of the staple composing the stock may be weakened, resulting in yarns and fabrics possessing a higher degree of stiffness and dryness than desired. If the acid used is too strong, combined with an excess of heat in baking, the fiber will not only be rendered harsh, but weakened so that the textures into which they are made will not come up to the standard in strength and elasticity. A form of cylindrical baking apparatus is shown in Figure 2 composed of the main cylinder F of iron which is four feet in diameter and eight feet long. It is arranged to revolve on its shaft, being turned by the belt K. The heating of the cylinder is accomplished by either interior coils of pipes or by exterior coils as shown at G. The steam for this purpose is taken from the boiler plant through the lead pipe H.

In some mills the baking chamber consists of an apartment made with hollow walls into which spaces the steam for heating is introduced. Whatever the form of baking devices used, the principle is the same. The intense heat carbonizes all matter except the product of the fleece of an animal. When once carbonized it is an easy matter to remove the foreign slug from the staple. By simply taking a handful of the stock and rolling it a little, the charred substance will crumble and fall out.

The finishing process of the carbonized stock involves dusting to remove the pulverized foreign materials. This is quickly and completely accomplished by running the stock through any common dusting machine. Washing now follows during which all traces of the acids used in the carbonizing operation will be removed and the staple left soft, clear and free of all substances not rightly belonging to it. If not washed, before passing the stock to the carding room the residue from the chloride would interfere with the free action of the fine points of the carding wire. Carbonizing with chloride of aluminum, or the salt solutions is done in solutions of 5 degree to 7 degrees Baume.

Plan Campaign for Rehabilitating the Cotton Growing Industry.

Washington—Col. Harvie Jordan national secretary of the American Cotton Association, while here last week, gave out the following statement:

"The drastic failure in cotton production for the past two years and the critical situation facing production for the future have become matters of deep national and international concern to the entire world cotton industry. Herculean measures must be vigorously undertaken if the American cotton crop is to be preserved and normal production revived.

"Practically 68 per cent of the growers are small one and two horse tenant and share cropper farmers. Faced with the extreme hazards of the boll weevil destruction, without credits and largely without intelligent leadership, this vast army of cotton growers is rapidly becoming discouraged and thousands of the growers are leaving the cotton fields to seek more certain and lucrative employment in other lines of industry. These people must be reached, helped and encouraged by cooperative and efficient leadership of they are to be held on the farms and their labor utilized in maintaining our world monopoly of cotton production. The large planter, with efficient management and financial ability to properly conduct his farming operations can and will solve the boll weevil problem on a profitable basis.

"The American Cotton Association, with its membership connection in all of 840 cotton-growing counties, is

planning to put on a Southwide educational campaign for reaching every grower and teaching him the best methods of intensive cotton culture, fertilization and the control of weevil infestation by the practical use of calcium arsenate poisons. The association expects to conduct demonstration experimental stations in at least 400 counties and use these stations as a guide for every cotton farmer in the counties where located. The methods to be employed in the operation of these demonstration stations will be simple, inexpensive and efficient.

"The association expects to have the active cooperation of the U. S. Department of Agriculture, in furnishing experts in weevil control to aid in the management of these demonstration stations and in reaching the rank and file of the cotton growers in each county.

"If every farmer, large and small, can be induced to adopt efficient weevil control methods early in the season, it will prevent the propagation of millions of the insects and thereby save the crop from annihilation during the migratory period which begins each year the latter part of July.—Daily News Record.

Foreign Domestic Trade.

For this period—cotton consumption in the United States was above any year previous to 1916 and above all previous years, with the exception of 1916-17-18-20.

For the same period, exports of raw cotton were the smallest since 1914, with the exception of 1917 and 1918. 1915 was the big year.

Imports of wool for this period were the smallest since 1914 with the exception of 1920.

Imports of raw silk were the largest on record.

Imports of hides the smallest since 1913 except in 1918 and 1921.

Exports of wheat were the smallest since 1914, with the exception of 1918.

Imports of raw sugar were the largest on record and of raw rubber, the largest with the exception of 1920.

Carload shipments of automobiles from factories for the same period were 248,928 cars as against the previous record for the first nine months of the year of 214,149 in 1916.—From Weekly Letter of Hunter Mfg. and Com. Co.

Introducing Newport Direct Fast Scarlet 8 B.

This is one of the series of Benzo Fast Scarlets and because of its very good fastness to light and acid should find a very extended use. It is very suitable for use in combination shades and finds also a wide application in the dyeing of union material. Newport Direct Fast Scarlet 8 B has a fair fastness to chlorine and is suitable for use in discharge work because it gives a good clear white.



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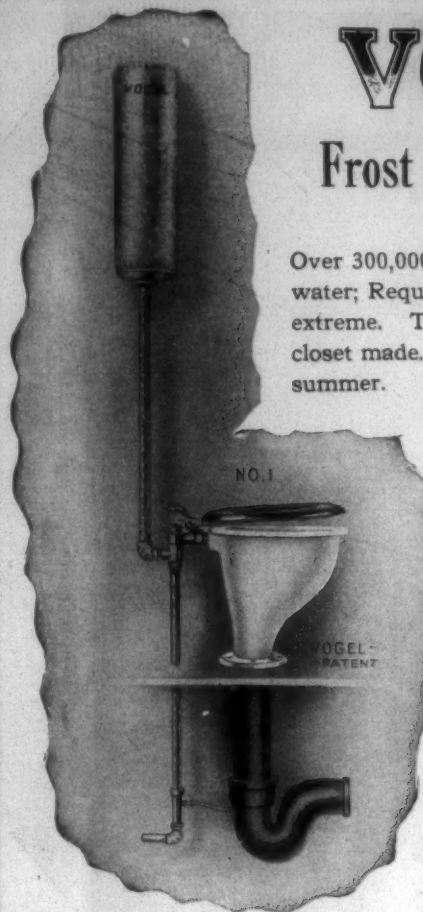
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top flats.

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have also had years of experience.

Such experience does count and we want
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It is the whitest, longest-wearing mill white made. And it stays white. Time will not turn it yellow nor lessen its great refractive powers. Dixielite dries with a hard finish that will not chip, crack or peel. Soap and water keep it perpetually new.

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DIXIELITE

Developments of Electric Drives for Cotton Mills in United State.

(Continued from Page 6.)

has been accepted practice in this country for many years. The motor sizes used, range from 1-3 to 1-2 H. P. for a narrow loom on light work up to 2 H. P. for wide looms handling heavy duck or tire fabric.

The connection between motor and loom is universally made through the medium of gears. The drive is so arranged that the motor runs continuously. The large gear driven directly from the motor pinion forms part of a plate or cone type friction clutch. The loom is started and stopped through the operation of this clutch. The increased production of better quality goods leaves no room for argument against their individual drive.

Finishing Plant.

There are a number of interesting applications of individual motor drives in finishing plants where adjustable speed is required. From the nature of the speed requirement they divide themselves into two classes. One class, which requires a speed adjustment of not over 2 to 1, can be taken care of satisfactorily with alternating current motors. The other class, requires speed adjustment over a much larger range and for this the direct current motor is most suitable.

Certain dryers and calendars require only a small variation in speed, not over 2 to 1, and for these drives, a wound rotor type of alternating current motor has been found to work very satisfactorily. It is essential in applying such a drive, using a wound rotor motor

with external resistance, that the load imposed by the driven machine on the motor be known so that secondary resistance can be supplied with the motor in order to give the required speed variation. This means also that on any given drive with resistance in the secondary of the motor, the variation in power requirement will mean a variation in speed on the machine. This holds true also with the commutator type alternating current motor.

The most satisfactory adjustable speed motor is the direct current motor obtaining the majority of its speed variation through the control of the shunt field.

A typical application of the adjustable speed direct current motor is on cloth printing machines. Here a speed variation of from 4 or 5 to 1, is required, and in some cases more than this, for the normal operation of the machine, depending on the class of goods. A direct current adjustable speed motor of the proper horsepower rating is selected and a suitable mechanical drive is provided to the machine, usually gear or silent chain, to enable the operator to secure the range of speeds required, for instances, this may be from 20 yards per minute to 80 yards per minute. Usually a magnetic type of control is used which may be operated from a push button station located on the frame of the printing machine. By suitable armature control on the motor, the machine may be started and run for short periods to insert the cloth and for setting rolls at a speed approximately one tenth of the maximum speed of the machine, or in

Why a Morse Silent Chain

The Morse silent chain is used because of its superiority based on the design of the exclusive "rocker-joint" construction, the very highest grade of material and heat treatment, the extreme accuracy in manufacturing and the engineering assistance in the designing of textile drives by engineers trained in this particular line and backed by the long standing reputation of the MORSE CHAIN COMPANY.

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the case cited above, this minimum speed would be approximately 8 yards per minute. Usually the motor field rheostat is located where it can be controlled manually by the machine operator. After setting this rheostat to a point to give approximately the speed required for the work to be done, the operator by pushing a button, brings the machine up to this speed. At any time the machine may be allowed down to a speed corresponding to full field motor speed by pushing the "slow" button. The machine may be stopped at any time, and when stopped, the "fast" button may be pushed and the machine will be brought automatically up to full speed without further effort by the operator. By means of the field rheostat, the speed of the machine may be controlled over the full range of speed of the motor, in as many steps as there are points on the field rheostat, which is unusually about 40. In the same way the adjustable speed direct current motor may be applied to any class of machine.

In the finishing of goods, it has been found advantageous to make a continuous process out of what previously had been two, three or four separate processes. For instance, a starch mangle, a set of dry cans and a tentering frame may be arranged so that the goods may pass in a continuous line through these processes. For this drive, as outlined, 3 adjustable speed motors would be required each having the same maximum speed control range.

Mechanical connection between motor and each machine would be so arranged that the cloth would travel at the same approximate rate through each machine when all motors were running at their minimum speed. By means of one master rheostat, usually consisting of 3-separate rheostats with their operating shafts coupled together, the speed of all motors may be increased or decreased together. Between each machine is a moving roll over which the cloth runs and the movement of which is determined by the tension of the cloth. This moving roll, or "dancer" roll as it is sometimes called, is mechanically connected to a small rheostat in the field of one of the motors. In the layout with 2 extra field rheostats one of these rheostats would be in series with the main field rheostat of the motor on the field machine, and the other in series with the main field rheostat of the motor on the last machine of the group. Any change in speed between the machines would vary the tension on the movable roll, thereby changing the resistance in the field of one of the motors and by either increasing or decreasing the speed of the motor, would tend to return the moving roll to a point of equilibrium where the machines would be running at the same cloth speed. This method of tandem drive has many applications in the finishing mill. The same idea of tandem drive may be applied using wound rotor alternating current motors over a limited speed range. After the initial ad-

justment of the drive has been made, they operate very satisfactorily.

We believe that the model cotton mill of the future will be one where each machine or unit will have its own electric motor. The builders of textile machinery are taking greater interest in this form of drive and many machines are now sold completely equipped with motor and control. The most satisfactory progress along development lines will be made in the future as they have been made in the past; through the cordial cooperation of the mill, the builder of textile machinery, the textile mill engineers and the builders of electrical equipment.

Remarkable Recovery of French Textile Industry.

At the end of the war the textile industry of Lilli, Roubaix, Turcoing, and adjoining territory, found that barely more than the four walls of the mills remained. Reconstruction has proceeded since at such a rate that today, says Vice Consul Squire, in a report to the Textile Division of the Department of Commerce, the mills are, according to the most authentic reports, at 90 per cent of their pre-war condition.

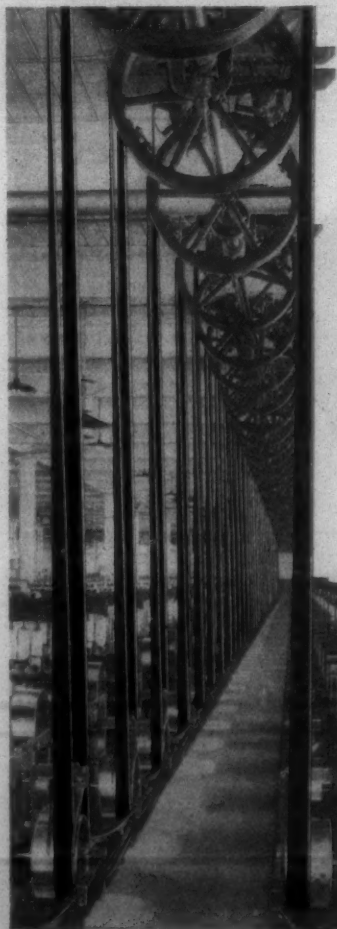
This reconstruction has been accomplished under the individual initiative of the mill owners. It has been financed by the mills themselves, by bank and by whatever aid the government could supply. Thus it has come to pass that much of the mills resources are tied up in

this work and that they are also obligated to the banks in a varying degree.

With the reconstruction practically finished, certain members of the textile industry, following other industries, have organized a syndicate known as the "Groupment des Industries Textiles," the object of which is to convert these tied up funds into immediate working capital. The emission took place in the first week of October and was for a maximum amount of 152,300,000 francs, divided into 304,600 shares, issued at 475 francs, par value 500. Interest is 6 per cent payable semi-annually. Each manufacturer participating in the loan guarantees it for the part he takes, which, in sum, represents the amount of his loss sustained during the war. No concern can enter the "Groupment" without having its claim approved and passed by the government. Hence, the amount of the issue approximates the loss sustained by the textile industry of this district as a result of the war. It is understood that these claims are eventually to be paid from German reparations and in measure as the claims are settled the shares will be redeemed at par.

The textile industry suffered a year ago from a stagnation of business. Since the beginning of this year it has entered into an era of every increasing activity, which has culminated during the past four months in a degree of intensity never before attained since the resumption of business in 1919.

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In this drive, belting performance counts high in actual production. Spar Oak belting reduces slippage, maintaining the required speed of the machine without increasing the load at the power plant because the pulley side of the belt is live elastic

SPARTAN LEATHER

There is a Graton & Knight belt that will give you maximum power per square inch of pulley surface, a belt that will cling to the job year in and year out, but there is no such thing as a universal belt. Each particular drive presents its own problem. The Graton & Knight engineering department is at your service at all times. No obligation involved when you call upon it to answer your belting questions.

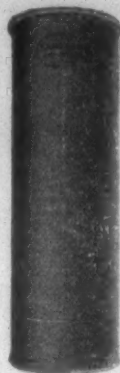
Graton & Knight belts are the result of many years' research. The hide is tanned for the exact kind of belting it is to become, and all the way through the various processes of manufacturing, the ultimate object is under consideration.



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Look at the top—double-rolled hand-turned. It's extra strong.

Inside and out this Laminar Can is perfectly smooth. Nothing to catch the sliver. Has a clear entrance and exit.

And as to durability of Laminar Cans. 'Way back in '88—thirty-four years ago—the Lawrence Manufacturing Company of Lowell, Mass., purchased a quantity. Some of these are still in service every day.

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Mill Devices Co. Durham, N. C.

A. B. CARTER, Sales Agent, Gastonia, N. C.

Before concluding this article the writer would like to call the attention of cotton manufacturers to the attempt which is being made by agitators in India to seriously damage the cotton trade of this country. These people are preaching that Lancashire cotton yarns are sized with a size containing beef tallow. It would be a matter worth the attention of all manufacturers of cotton goods for the Indian markets if they would insist upon being supplied with mutton tallow. This can be easily arranged, because in the great fat markets the fats are graded and separated, and it should not be difficult for the tallow renderers to co-operate in this matter and place the tallow used for Indian goods beyond suspicion.

In conclusion, the writer would like to mention the serious complaints which are daily arising through damage from oil stains. Dyers and calico printers are having endless trouble with this fault. Much of it is caused during spinning through the yarn getting splashed on the cops. In other cases it is caused by oils fluff-getting into the fabric as it is woven. Valuable cotton goods are damaged every day in this way, and spinners of good-class yarns, and manufacturers of good-class cloth, would be well advised to reconsider their position in the use of oils. There is no such thing as a stainless mineral oil. The only stainless oils are vegetable and animal saponifiable oils. A mixture of such oils with mineral oil would be better than mineral oil alone, as such mixtures are very

much more easily removed during the boiling operations in bleaching. It is also important that manufacturers take care how oil stains are treated in the weaving shed or warehouse. They should not be rubbed, especially if the cloth is for dyeing, because rubbing distorts the face of the fabric, and it will come up as a fault in dyeing. It would be much better if manufacturers would either leave oil stains alone and mark the places for the bleacher to see, or saturate them with olive oil, and thus let the bleacher have a better chance to deal with them in a proper manner later.

Czecho-Slovakian Hand-Made Lace Business Bad.

As compared with the output of pre-war years, the manufacturing capacity of the Czecho-Slovakian hand-made lace industry during the period immediately preceding the recent rise of the Czecho-Slovakian crown is reported to have been from 50-75 per cent but the recent depression in value of the crown caused considerable depression in the industry, orders being cancelled and factories forced to curtail, says Consul Winans, Prague, in a report to the Department of Commerce.

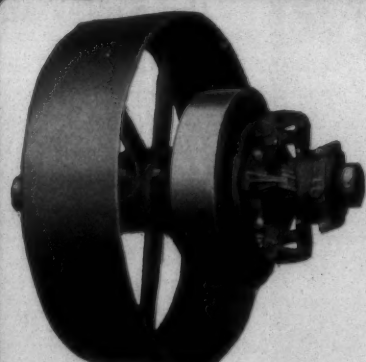
Trade Commissioner Stevenson reports that a new wool textile mill is to be established in South Africa. The capital calls for £300,000 in £ shares. The name of this mill may be obtained from the Textile Division of the Department of Commerce by referring to File No. 170.

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friction surfaces of large area, compact mechanism and unusual strength is readily applied and adjusted, gives maximum results with minimum wear and is adapted for all classes of service where a friction clutch can be used. Save power with WOOD'S Transmission Machinery.

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POWER TRANSMITTING MACHINERY

A Modern Dairy at Ware Shoals.

Greenwood, S. C.—Owning a dairy that is unequaled by any in this section, and a herd of thoroughbred Guernsey cattle whose value the owners will not even estimate, the Ware Shoals Manufacturing company is selling milk to its employees at a financial loss in order to protect the health of the citizens of Ware Shoals, and in order that clean, wholesome milk may be within the reach of every citizen of that town of 3,000 inhabitants.

"Our aim is to protect the health of our citizens and to take care of our future citizens," James F. MacEnroe, treasurer of the Ware Shoals Manufacturing company explained to a newspaper man a few days ago. We lose money on the dairy, but we don't feel that it is money wasted, he continued, explaining that wagons delivered pasteurized whole milk to the homes of citizens of Ware Shoals twice each day at 15 cents per quart.

The Ware Shoals Manufacturing company started its dairy in 1916 and since that time, the herd of thoroughbred Guernseys has grown from a small nucleus to 77 cows and five bulls. Some of the best Guernsey blood in America flows in the veins of the Ware Shoals cows. The sire of Ultra Select, one of the Ware Shoals cows, sold for \$30,000. The sire of Administration's Appia sold for \$10,000 before he was born. When Lollina Gypson was eight gallons of milk per day. She is now 13 and is still producing four gallons per day. Yeksa Heroine produced 60558 pounds of butter fat last year at the age of 3 1-2, or within 13 pounds of the world's record for Guernseys.

The dairy is in charge of A. Westergaard, a native Dane, who resigned a commission in the Danish army to become a dairyman. He comes of a long line of dairymen, his father before him having run a dairy in northern Denmark. "Raising cows is better than drilling men," he says.

The Ware Shoals dairy is favored with the interest of nearly all connected with the Ware Shoals Manufacturing company. James F. MacEnroe, the treasurer, knows nearly as much about the cows as the dairymen. J. Capers Gambrel, superintendent of the Ware Shoals department store, the oil men, ice plant, etc., claims the dairy as a particular hobby, and when President Benjamin D. Reigel comes one of the first places he visits. Cattle breeders and dairymen from all sections come to Ware Shoals to see how the dairy there is operated.

Develop Johnson Shoals For a Big Cotton Mill.

Greenwood, S. C.—Urging the development of Johnson Shoals on Saluda River, four miles above Ware Shoals, and the erection of a cotton mill there, a delegation of citizens of Laurens, headed by W. L. Grey, of Laurens, appeared before Benjamin D. Reigel, president of the Ware Shoals Manufacturing company and discussed the proposal with him, it was announced. Mr. Reigel told the

Laurens delegation he would take the matter under advisement and would consider it.

Johnson Shoals, it was pointed out, is ideally situated for the location of a cotton mill, with sufficient fall to furnish hydro-electric power.

President Reigel is spending several days at Ware Shoals, having come down from New York for the annual meeting of the directors and stockholders of the Ware Shoals Manufacturing company. Dr. J. B. Workman was elected a director of the Bank of Ware Shoals to succeed J. C. Martin.

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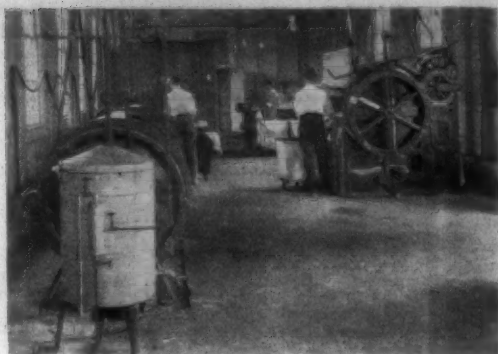
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Sizing Problems.

It has become a platitude to say that "sizing is the most important preparatory process to which cotton yarns are subjected previous to being woven into cloth," and one is almost afraid to commence an article with this opening statement. It is none the less true, however, especially in the case of tape sizing or slashing, although warp sizing and hank sizing have their own peculiar problems, says Percy Bean in the Textile Recorder of England.

The main reason why tape sizing is an important process is because, unless the operation be carried out correctly for every class of work, damage may be done which is not discoverable at the time, and a great quantity of yarn may be incorrectly sized before the fault is discovered unless the sizer is a man of exceptional skill and experience. As a matter of fact the operation of sizing, so long as the work is kept within narrow limits in the class of yarns being dealt with, and the class of cloth being produced, is one of the simplest operations in the production of cotton cloth. The real difficulty is that there are such a large variety of cloths being woven from such a large variety of yarns that it is almost impossible for any one sizer to gain the necessary experience to deal with every sort of work which may be submitted to him. On the top of this, there is the secrecy which seems to dominate every person who has been taught how to work a tape-sizing machine. This secrecy is not really due to the fact that the sizer has any particular secret methods unknown to others who are engaged on the same class of work, and it is very near the truth to say that it is due to his limitations.

The tape sizer does not serve an apprenticeship covering a long period such as was common in many trades some years ago. He is generally selected because he is a man above the common intelligence of his class, and is recognized as a steady and reliable workman. It is no exaggeration to say that most tape sizers take a great deal of interest in their work, and become very expert in the class of work they are accustomed to. The main trouble is that very few get the chance of going from one mill to another in order to gain variety of experience. This is not altogether the fault of the sizer, because he has to face the objection of the millowner, who is not prepared to allow anyone who has not had the particular experience of his own works to take on the responsibilities which may land him in serious loss. Consequently it is a common thing to find tape sizers employed in one works all their lives.

A good taper sizer must have sensitive fingers and a receptive brain, because, unless he is possessed of these faculties, he can never correctly interpret the conditions he finds when feeling the yarn as it passes on to the weaver's beam. His fingers should convey to his brain whether the yarn is sufficiently dried, without being over dried, and whether the size is correct in amount and in quality for good weaving purposes. If he is not cap-

able or not careful enough to correctly interpret these results he is certain to bring about very serious trouble.

Not less important than the sizer is the size mixer. As a rule the responsibility for the size mixing, and the mixing together of the sizing ingredients, is left to the manager. He selects the mixing for the particular work in hand, and the mixing of the ingredients is usually carried out by a laborer. This is often considered a wrong thing to do, and it is argued that this work is so important that it should be carried out by a very skilled operative. The writer does not agree with this, and in his experience he has found that less mistakes are made by men who simply carry out their instructions than those who think too much. Size mixing is a monotonous job, and it is not really advisable to have a man with an active brain whose mind might stray from his own particular job. This opinion may appear to be against all modern views on education, but it is based on personal knowledge and observation.

The operations involved in mixing size for pure or light sized yarns is a very simple matter, and frequently the taper attends to this himself. In the case of heavy sizing it is necessary to have some one who has nothing to do but attend to the mixing of the ingredients. Very large mixings are made for heavy sizing, and it is not unusual to have at least two tons of dry material in one mixing.

In pure or light sizing, where the ingredients consist of some adhesive substance, such as sago, farina, or maize, or mixtures of these substances, and some form of softening material such as tallow, it is only necessary to run the necessary quantity of water into the mixing beck, and then add the starch, or starches, which are agitated for sufficient time to become thoroughly disintegrated; finally adding the tallow or other form of softener and bringing the whole to the boil. The boiling should be carried out for the same length of time for mixings for similar classes of work, and the final mixing should always occupy the same volume in the beck when the boiling is completed. This keeps the size regular and the results uniform.

The mixing of heavy size is a more complicated business, and it should be carried out as follows:—

The clay should be boiled in the clay pan for several hours in order to break up into as fine particles as possible. It should then be allowed to cool sufficiently to mix with the flour without causing the latter to thicken through gelatinisation of the starch granules. When cool enough it is run into the flour in the mixing beck, which has been previously pumped over from the flour beck. As a rule the china clay is boiled along with the solution of chloride of magnesium, because it helps to thin the clay in very heavy size mixings where only a minimum amount of water can be used. The tallow is usually added about half an hour before the completion of the boiling of the clay. The chloride of zinc, which is used as a preservative to prevent mildew, is gen-

erally mixed in the proper proportions with the flour which has been steeping in water. In some cases it is added to the flour when this is pumped over into the mixing beek.

When the ingredients have been brought together they should be agitated for as long a time as possible in order to bring about complete mixing. Two or three days is not too long for heavy mixings, and a longer period would be beneficial. Unfortunately those firms who go in for heavy sizing are usually the worst equipped for the work they are trying to do. Generally they have not sufficient becks to carry out the operations properly, and a mixing is used as soon as it is made. The result of this is that the ingredients do not get properly mixed together, and the size "dusts off" in the weaving shed, giving rise to very disagreeable conditions. The same objectionable "dusting" takes place if the china clay be run into the flour too hot. There is no doubt in the writer's opinion that a lot of the objection of the operatives to making heavy-sized goods would be removed if manufacturers would amend their methods of making the size.

Heavy sizing is a much more difficult process than pure sizing, and it requires a man experienced in this class of work to get the right results. On the other hand, a man who has been accustomed to heavy size all his life might easily get into difficulties if he were transferred to pure sizing. In heavy sizing the yarn has to be run damp in order to ensure good weaving, and there are preservatives present to prevent mildew. On the other hand, in pure sizing the yarn must be run much drier, and there is not usually present any preservatives, as they might interfere with later processes such as bleaching, dyeing, printing, or finishing. It is this knowledge of the correct methods which enables a sizer to apply his skill to different classes of work.

One of the most difficult problems in tape sizing is the treatment of the colored yarns in dhootie bordered

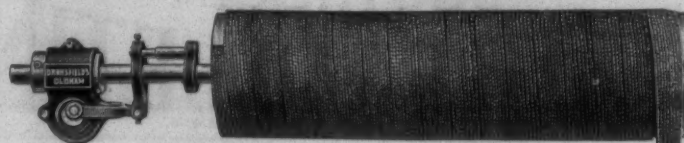
goods, which contain heavily-sized grey yarns in the body of the cloth. The colored yarns must be pure sized, otherwise the colors would be "smothered," and for this purpose a separate sow or size box is used on the tape frame. The ordinary arrangement of this box is such that the colored yarns must pass over the drying cylinders on the top of the grey yarn. It has been mentioned already that heavily-sized yarns must be dried less than pure-sized yarns, but the arrangement of the colored box does not permit this, and there is a very serious risk that the insufficiently dried colored yarns may become mildewed in the weaving shed, or when the goods are packed. These colored yarn may prevent the mildew showing at an early stage, but it is certain to mark off on to the grey when the cloth is percelled and afterwards pressed in the bales.

It is possible to rearrange the yarn from the colored box by means of stave rails in such a way that the colored yarn goes over the drying cylinders underneath the grey yarn and so get extra drying. Even this is not always sufficient, and in many cases an extra drying cylinder is used for the colored yarns. Most firms who make colored bordered goods have trouble with mildew at some time or other, and the risk is contributed to by merchants using too much moisture in the ink with which each 10-yd. piece is stamped. It is not an uncommon thing for mildew to be started in bales of dhootie bordered goods through packing the goods too soon after stamping. The colored borders are usually affected and the mildew marks off on to the grey, which might have passed without damage on account of the preservative present if it had not been for the presence of the pure-sized colored borders. It will be easily seen that if a merchant stamps a large quantity of 10-yd. pieces, and then begins his packing with the last one stamped, he is going to have varying degrees of moisture in the different parcels each containing ten 10-yd. pieces.



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THURSDAY, NOVEMBER 9, 1922.

Higher Cotton.

We are all familiar with the ancient fable of the wolf wherein a boy numerous times cried wolf when there were no wolves and frightened his family, but when the wolves really came his cry went unheard and all were devoured.

The cotton bulls have for many years cried "cotton scarcity" when there was no scarcity and now that a real cotton scarcity confronts the cotton world people laugh and few believe.

More than six months ago when cotton was far lower than today we predicted 30 cent cotton and we have done everything in our power to get the Southern mills to buy their supplies of cotton.

We are glad to know that Southern mills have bought more cotton than ever before in their history and some of those who secured their supply around 21 cents very kindly admit that the figures given by the Southern Textile Bulletin greatly influenced them and we believe that Southern mills are hundreds of thousands of dollars ahead of the game because of the information we published.

The mills of England and New England have not yet purchased the bulk of their cotton and for once the Southern mills have beat them in buying cotton and are in position to underbid them in export trade.

The statistical situation as we see it makes 30 cent cotton a surety and much higher figures are probable if the following figures are as correct as we believe them to be.

The National Ginners now give the indicated crop for 1922 as 9,400,000 bales but we believe that 9,800,000 will be nearer correct.

1922 Crop..... 9,800,000
Aug. 1st, 1922, carry-over.. 4,900,000

Total supply Am. mills....14,700,000
Indicated consumption of
American cotton.....13,000,000

Supply Aug. 1, 1923..... 1,700,000

These figures mean that there will be less than 1,700,000 bales of American cotton in the world on Aug. 1st, and from this must be secured the supply from August 1st until new cotton is available and also to keep enough on the way to Europe to keep her mills supplied.

Figured from the standpoint of the United States alone we have the following:

Aug. 1st, 1922, carry-over
in U. S..... 2,828,000
1922 Crop 9,800,000

Total supply in U. S.....12,628,000
Consumption and Exports..12,100,000

In U. S. Aug. 1st, 1923..... 528,000

As very little new cotton will be available until September this amount of 528,000 bales will have to supply the American mills and furnish exports to Europe.

This 528,000 will not be available unless the farmers turn loose every bale and strip their farms clean, and surrender their cotton rather than hold for higher prices.

The 12,100,000 estimated consumption and exports is the figure of the past year and those who hunt for bearish arguments claim that it will not be equalled this year.

Whatever decline there may be in exports will be equalled by the increase in domestic consumption as American mills are far busier than last year and many are now operating night and day.

It is yet to be shown that exports will be decreased and there is a good reason to anticipate increased foreign demand.

In spite of the decline in marks Germany has already taken 293,000 bales as against 245,000 bales last year.

The man who can see more than a half million bales in the United States on August 1st, 1923 bases his estimate upon his wishes rather than upon statistics.

The higher cotton goes the tighter many farmers hold and it will be hard to reduce the amount in the farmers hands to less than 500,000 bales.

Realizing the probably scarcity shrewd speculators will certainly acquire an amount that may be estimated at 500,000 bales.

American mills can not secure their cotton the day they use it and they usually carry a stock of 500,000 bales. European mills must not only have a stock of cotton on hand but always must have a supply afloat and 500,000 would be a low requirement for them.

The 500,000 probable carry-over in the United States on August 1st, 1923, must not only supply the American mills until the new cotton comes in but must cover the farmers holdings, the speculators holdings and provide that afloat for Europe. Those who can see lower prices under such circumstances must have a peculiar vision.

And the end is not yet for the real bullish force in cotton is going to be the 1923 crop which must be 13,500,000 bales if the year from August 1st, 1923, to August 1st, 1924 is to be passed without mills standing idle for lack of cotton.

We have raised one crop of 7,962,000 and have this year 9,800,000 both being the results of the entry of the boll weevil into Georgia and the Carolinas. In spite of several years of 35 cent and 40 cent cotton we have raised only one 13,000,000 bale crop in nine years.

We may raise a crop of 13,500,000 bales next year but every cold wind next March and April and every rainy spell is going to throw a scare into the cotton world and furnish ammunition for the bulls.

If the season should be such as to reduce the 1923 crop to 10,000,000 bales which is, of course, possible, a large portion of the world's spindles would have to stand idle and there is no man who can figure otherwise.

Because cotton has advanced from 20 cents to 26 cents those who failed to buy at the lower figure hesitate to buy now.

We predict that many of those who will not buy their supply at 25 cents will rush to cover at 30 cents or even higher figures.

We do not hesitate to advise Southern mills to buy sufficient cotton to carry them until September, 1923. There may be periods of liquidation and small declines but those who wait for them may find their waiting expensive.

The cotton world is facing a condition which the never faced before and while other cries of "wolf" have been untrue there is no reason to pass unheeded the cry of today.

Prices anticipate conditions and we should not lose sight of the fact that the probable outturn of the crop to be planted in March, 1923, only five months from now, will be measured against the requirements up to September 1st, 1924.

Answers to Marion Grier.

We recently published the following which was written by Marion Greer of McCall, S. C., upon a tire fabric inspector's ticket and discovered by an inspector at the Good-year plant in Ohio:

When I am ded
And in my grave,
No more looms
Will I Crave.

But on my toom stone
I want it wrote:
Four automatics
Got my goat.

In response to this we received the following from Durham, N. C.

When Marion Grier
Took her pencil in hand
She started something
That beats the band.

Let me finish
What she tried to do
And for this
Your attention I woo.

"Those naughty looms,
Your spirit floored,
The fabric woven
Are on a Ford.

After you are
Dead and gone
Those four automatics
Will run on.

So worry not
Of toom stones
Those automatics will
Outlast your bones."

—Anon

From Charlotte.

About this dope, on automatics,
is enough to give one rheumatics;
It's not as bad as some year ago
When we went to work at half past
four,
The warps were bad, the lights were
worse,
Enough to make a preacher curse.

If Marion Grier only knew,
What we old birds all went through
She'd laugh and sing from morn 'till
night—

"The automatics are my delight!"

AN OLD TIMER.

From Albemarle.

Oh! Marion Grier, when you rote
About automatics and your goat,
Tomb-stone, grave and being ded;
Who'd a thought there'd been so
much sed

Of this poem that you rote
About automatics, tomb-stone, grave
and goat.

A LIVE ONE.

If there are other poets who have something to say about the automatics of Marion Grier we will be glad to have their communications especially if they are in defense of the automatics.—Editor.

Personal News

Frank Beck has been promoted to carder at Central Falls Mills, Central Falls, N. C.

G. A. Gullidge has become night overseer spinning at the Adams Cotton Mills, Macon, Ga.

S. B. Lawrence has accepted the position of overseer weaving at the Gluck Mills, Anderson, S. C.

C. L. Windham has resigned as assistant overseer spinning at the Loray Mills, Gastonia, N. C.

Clifford Atherton has accepted the position of superintendent of the Marietta (Ga.) Cotton Mills.

C. F. Blume has been promoted from second hand to assistant overseer spinning at the Loray Mills, Gastonia, N. C.

George Petty has been promoted from section hand to second hand in spinning at the Loray Mills, Gastonia, N. C.

W. L. Bray of Central Falls, N. C., has accepted the position of carder at Sapona Cotton Mills, Cedar Falls, N. C.

Lindsay Padgett has resigned as South Carolina representative of the United Chemical Products Corporation, of Jersey City, N. J.

W. H. Still has accepted position as traveling representative of the Textile Home, published at Charlotte, N. C.

R. R. Bain has resigned as overseer of carding at Sapona Cotton Mills, Cedar Falls, N. C., and accepted a similar position at Haw Mfg. Co., Haw River, N. C.

D. A. Evans has resigned as overseer weaving at the Gluck Mills, Anderson, S. C., to accept a similar position at night at the Toxaway Mills, of the same place.

Lewis Williams has resigned as master mechanic at the Piedmont Mills, Egan, Ga., to accept a similar position at the Pelham Division of the Consolidated Textile Corp., Pelham, Ga.

F. A. Dennis, of Tallahassee, Ala., has been appointed manager and superintendent of the Union Division of the Consolidated Textile Corp., LaFayette, Ga.

L. L. Williams has resigned as overseer weaving No. 2 at the Cotton Mill Products Co., Natchez, Miss., to become night overseer weaving at the Wannonah Mills, Lexington, N. C.

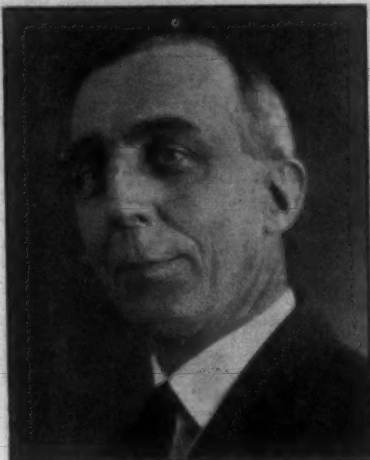
Dr. Karl Von Ruck Dead.

Asheville, N. C.—Dr. Karl Von Ruck, internationally known authority and specialist on treatment and prevention of tuberculosis, and who was also president of the Spray Cotton Mills, Spray, N. C., died at his residence here after an illness of several weeks.

Stephen D. Bennett.

Stephen D. Bennett has resigned as superintendent of the Efrd Manufacturing Company, Albemarle, N. C., to become general superintendent of the chain of mills to be built by the Dixie Spinning Company, at Chattanooga, Tenn.

Mr. Bennett came originally from

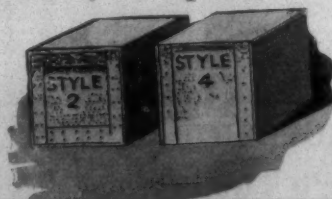


New England and was for a while superintendent at Cumberland, N. C., but has for about ten years been superintendent of the Efrd Manufacturing Company, at Albemarle, N. C., where he has made a reputation for efficiency of operation and is rated as one of the best hosiery yarn manufacturers in the South.

Mr. Bennett is especially strong on construction work having successfully designed and built a large addition to the Efrd Manufacturing Company.

The Dixie Spinning Company is now building a 15,000 spindle mill but contemplate building other units until a total of 250,000 spindles is reached and Mr. Bennett was selected not only for his ability to operate their mills but to supervise the erection of the mills to be built. Mr. Bennett is a member of the Board of Governors of the Southern Textile Association.

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Southern Agt, A. B. CARTER, Gastonia, N. C.

MILL NEWS ITEMS OF INTEREST

New Orleans, La.—The Maginnis Mills have placed an order with the Hopedale Mfg. Co. of Mulford, Mass., for 100 Nordray automatic looms.

Atlanta, Ga.—The Exposition Cotton Mills have decided to replace 400 of their present looms with new automatic looms. The purchase has not yet been made.

Ramseur, N. C.—The Columbia Manufacturing company has put in 132 40" E. Model Draper looms. These are operating on four-yard sheetings.

High Point, N. C.—The Robbins Knitting company, certificate of incorporation for which was received here is the latest addition to the textile plants of Guilford county. It is capitalized at \$150,000. C. C. Robbins, O. C. Durland and S. H. Holloman, all of High Point, are the incorporators.

Butler, Ga.—The Bibb Manufacturing Company is preparing to resume its night force at its Potterville Mill, and to meet the situation Superintendent W. F. Smith is advertising for a large number of employees. An insurance policy for \$300 and more is carried on each person employed at the mill.



Cleans Mill
Floors
Makes



Cost \$1.67 a barrel.

Cleaning material and labor expense reduced considerably.

9 gallons cleaning solution costs 1c.

Poland Soap Works
Anniston, Ala.

Cedar Falls, N. C.—The Sapona Cotton Mills are starting up the following new machinery, of Whittin make: 15 cards, 3 flyer frames, 3,000 spinning spindles. Will make 20s hosiery yarns put up on cones.

Oklahoma City, Okla.—A charter has been granted to the Sand Springs Cotton Mill Corporation, of Sand Springs, Okla., with a capital stock of \$1,000,000. Incorporators are Harry Folk, Edwin M. Monsell, both of Sand Springs, and Frank B. Long, of Tulsa, Okla.

Siluria, Ala.—At the annual meeting of the stockholders of the Buck Creek Cotton Mills, the following officers and directors were elected.

Mrs. T. C. Thompson, president; W. F. Stroud, first vice president; and treasurer; W. H. Weller, Jr., second vice president; M. L. Cannon,

chairman of the board. Directors elected included the officers and H. L. Zeigler.

Mrs. Thompson succeeded her late husband, T. C. Thompson, who died on October 5. He was president of the T. C. Thompson Bros. Co., of Charlotte, a contracting building firm that has built hundreds of mills in the South. He built the Buck Creek Mills here about 20 years ago and was president until the time of his death.

Montgomery, Ala.—According to cotton men of Montgomery, a vast majority of the cotton produced in Alabama is being consumed by the "local" mills, that is, mills located in this State, the Carolinas and Georgia. The South, the cotton expert said, is rapidly forging to the front in the manufacture of cotton goods. The output by Alabama

mills has increased a great deal this year. All mills are running full time now, and many of them are finding it difficult to fill orders as rapidly as they would like to.

Greenwood, S. C.—The new Brandon duck mill product is going on the markets, the offerings being made by Woodward, Baldwin & Co., selling agents.

This newly equipped million dollar plant is the most modern duck manufacturing plant to date in this country, according to Southern mill experts.

It will produce all widths and numbers, including the 192-inch heavy felts, and all the single felts from 146-inch to 165-inch.

It is also equipped to produce hose and belting duck, all sorts of numbered duck and the heavy naught ducks.

Woodruff, S. C.—Final contract for sale was signed in Spartanburg, by which the W. S. Gray Cotton Mills of Woodruff, S. C., was sold to a syndicate headed by Dr. H. A. Ligon and H. A. Ligon, Jr., together with their associates. Details of final price have not been worked out, but the total transaction will come to considerably more than one half million dollars. The W. S. Gray Cotton Mills was organized in 1909 and is known as a fine spinning mill, of 20,100 spindles. Present production is combed yarn, and it is probable that looms will be added making it a weaving mill. The transaction was handled by W. J. Thackston, representing the W. S. Gray Cotton Mills and A. M. Law, of Spartanburg, representing the purchaser.

Rome, Ga.—The contract for the buildings of the McLin Cotton mills, a concern recently organized here, was let to J. F. Dupree & Sons Co., a local concern. The capital of the mills company, \$450,000, was subscribed almost wholly in Rome and is all paid up. The mills will be in charge of C. E. McLin, at present head of the Anchor Duck mills, of this city.

More than 400 persons will be employed and special fabrics and heavy duck will be manufactured. All the machinery has been purchased and will be ready for installation when the buildings are completed, which is expected to be late in the spring of 1923.

This will be the sixth large cotton mill now located in Rome. The total number of employees with the new mill will exceed 3,000. The directors of the new concern include some of the city's leading business men.

Greenville, S. C.—Contract for a four-story extension of Mill's Mill was awarded to Potter & Shackelford, contractors, for a consideration of about \$35,000. With the awarding of this contract the increasing of the producing capacity of the mill by a sixth is practically assured. The consideration in the contract

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Charlotte Leather Belting Co.
Charlotte, N. C.

awarded is exclusive of all machinery and represents only the building structure. As planned the addition will be of brick construction, four stories high and with a floor measurements 50 by 100 feet on each floor.

The addition was planned primarily for the purpose of increasing the capacity of the cloth room which at present is too small to carry the volume of business now being done by the mill.

Work on the addition will begin immediately and is to be rushed through as quickly as possible, it was said. It is to be built on the side of the mill next to the Piedmont road and have capacity to house 5,000 additional spindles as soon as officials of the mill decide to install them.

The mill now contains 31,000 spindles and the addition of 5,000 new spindles would increase the capacity one-sixth and give employment to forty new operatives. There are now 480 persons employed by the corporation.

The mill now produces 200,000 yards of cloth every month and with the addition will be able to manufacture approximately 233,333 yards monthly. This is figuring from the basis that the mill will be running night and day as is the case now.

Woodruff Mills Declare Stock Dividend of 50 Per Cent.

Woodruff, S. C.—A stock dividend of 50 per cent and a cash dividend of 10 per cent, payable in stock December 3, and in cash January 1, has been declared by the directors of the Woodruff Mills.

The cash dividend includes the regular semi-annual dividend of 5 per cent and a special dividend of 5 per cent.

An erroneous report published last week stated the stock dividend was 200 per cent.

New Mill at Great Falls to Have 1,000 Looms.

Great Falls, S. C.—The greatest item of construction news along textile lines ever announced in Chester county was that given out that a new 1,000-loom textile manufacturing plant will be built here shortly. The machinery has been bought and construction work will be launched immediately.

This will give Great Falls its third textile manufacturing industry. At present it has two plants, known as the Republic Cotton Mills, operating 54,848 spindles and a battery of 1,320 Draper looms.

The new plant will be a monu-

mental affair and will be one of the most modernly equipped textile plants in the nation.

It has been rumored for over a year that a new mill would be erected in the Republic Cotton Mills and

many believe that he ultimately plants an even greater textile development here.

The Republic Cotton Mills were established in 1910. A second plant was erected in 1916. Robert S. Mebane is president; H. B. Mebane, vice president, and Deever Little, superintendent. The Mebane brothers are natives of Mebane, N. C. John A. Howard is secretary of the company.

The Republic Mills, except for holidays and Sundays, have not stopped a day since they started in 1910. They have never had a strike. Living conditions of the employees are ideal, the mills owning 2,000 acres of land in the vicinity and surrounding the mills. On this broad and open acreage there are 412 tenement houses. The product of the mill is a splendid grade of print cloth.

Monroe Mills Consolidated.

Monroe, N. C.—Announcement was authorized here of the consolidation of the Iceman Knitting Mill, the Icemorlee Cotton Mill and the Everett Cotton Mill into one general corporation to be known as the Icemorlee Cotton Mill company, with an initial capitalization of a million dollars, with the privilege of increasing to a million and a half if such increase should be found necessary.

A. J. Draper, of Charlotte, has been selected to head the consolidated interests as president of the new corporation, with Charles Iceman and J. H. Lee, of Monroe, as vice presidents.

The return of Arthur J. Draper prominent Charlotte citizen and capitalist, to active textile mill operation, will be handled with interest in textile circles throughout the country. It was two or three years ago, that he retired from the presidency and active control of the Chadwick-Hoskins company, operating a chain of textile mills around Charlotte and at Martinsville, Va. He retained a large financial interest in the Chadwick-Hoskins company, however.

Mr. Draper has long been recognized as one of the leading textile manufacturers of the South and was formerly president of the American Cotton Manufacturers Association.

The new Monroe group consists of the Iceman Knitting mill, manufacturing underwear, and two cotton mills, the Icemorlee with 10,000 spindles, and the Everett, a smaller mill, with 2,500 spindles. However, Mr. Draper stated, the mills will in all probability be enlarged.

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must be one that for simplicity with great capacity and economy in maintenance produces uniformly such conditions that may be determined for the different requirements of the work. In the American Moistening Company's method of humidifying, all such requirements are GUARANTEED.

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QUALITY PRODUCTS SCIENTIFICALLY COMPOUNDED

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Tribute to R. A. Whatley.

LaFayette, Ga.—After eleven years of service, Mr. R. A. Whatley has resigned at superintendent of LaFayette Cotton Mills.

The mill employees, desiring to show in some way their love for him, and their appreciation of his never failing interest in them, held a mass meeting at the closing hour on Saturday, October 28th, and presented him with a beautiful gold chain with Shrine emblem.

In his words of acceptance, Mr. Whatley warmly thanked them for the gift, and then briefly reviewed his years of service with them.

On Monday night following, at the mill Community House, a lovely reception was given for Mr. and Mrs. Whatley, and a large crowd was present to bid them good-bye and express to them their very best wishes.

Capt. Lang Still Active in Association Work.

We are very much pleased to learn that our old and valued friend, Capt. E. Lang, of Atlanta, will be present at the Southern Textile Exposition.

Capt. Lang was very active in the early development of the American Cotton Manufacturers' Association then known as the Southern Spinners Association and now takes a deep interest in the Southern Textile Association.

We are also gratified to know that

our prognostications made in a former issue has been fulfilled for we are informed that Capt. Lang made such progress that the U. S. Oil & Supply Company have advanced him from the position as assistant sales manager to that of sales manager of the Southern division and are now placing men in all the Southern states, including Greenville, as a central shipping point for South Carolina, under the charge of J. H. Bakwell, as assistant sales manager.

Bid to Supply Marine Socks.

Philadelphia. — Seven concerns submitted bids at the Marine Corps Quartermaster Office for supplying

94,000 pairs of woolen socks and 100,000 pairs of cotton socks. Southern bidders' quotations were as follows:

Lynchburg Hosiery Mills, Lynchburg, Va., woolen, 29.1 cents per pair; delivery completed in March. Terms, 1 per cent, 10 days.

Marietta Knitting Co., Marietta, Ga., cotton only, 21 12.46 cents pair; delivery completed February 1.

Hunter Manufacturing & Commission Co., New York, cotton only, at 16.41 cents pair; delivery completed by February.

A. W. McClellan, New Orleans, cotton only, at 8.875 cents pair, delivery 24,000 pairs weekly, starting in two weeks.

Mrs. A. W. Roper Dead.

Mrs. A. W. Roper, wife of A. W. Roper, assistant superintendent of the Couch Cotton Mills, East Point, Ga., died recently at the University Hospital in Augusta, Ga.

Mrs. Roper was one of the most beloved women in her community and her death brings sorrow to a wide circle of friends. Besides her husband, she is survived by five children. The funeral was held in Blacksburg, her former home.

Wanted:

Foreman Carding and Spinning State experience and give references, salary expected, age, etc., in first letter. Good opening for right man. Answer, Care XYZ Southern Textile Bulletin, Charlotte, N. C.

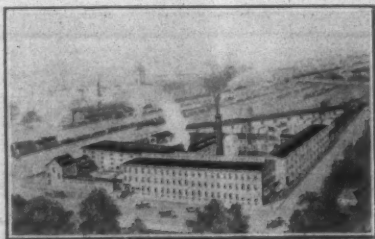
Special Notice.

Wanted Superintendent for mill making medium and fine gauged misses hose, also ladies hose in medium and fine gauge staple and sports. Man with knowledge of all the processes of manufacture, of proper dyeing and packing and a good manager of help for a mill located in one of the best towns in the State with general surroundings pleasant. Reply to H. G. C. care Southern Textile Bulletin, Charlotte, N. C.

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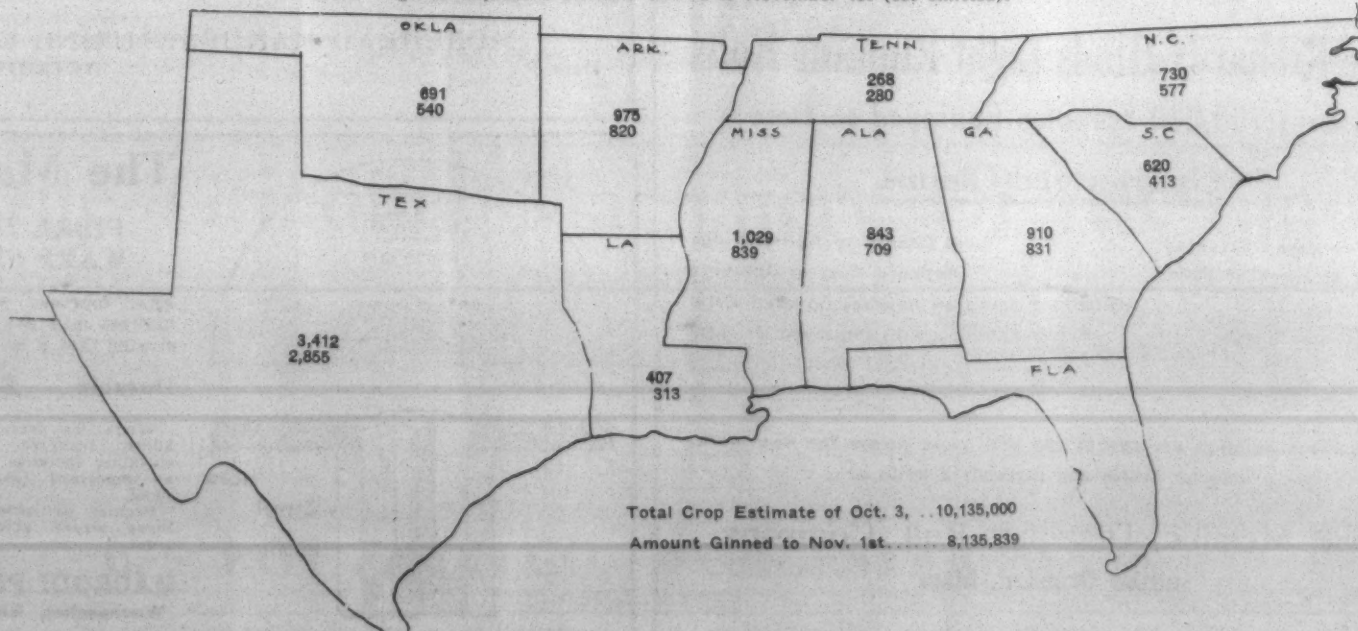
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COTTON GINNED TO NOVEMBER 1st

Top Figures Represent Government Cotton Estimates of October 3d (000 omitted).
Lower Figures Represent Amount Ginned to November 1st (000 omitted).



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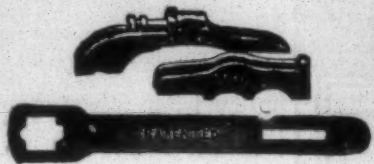
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Better Spinning with Improved Product

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Also for prices and particulars write to

The Metallic Drawing Roll Company
Indian Orchard, Mass.

The Business Cycle.

(Continued from Page 54.)

curve clearly forecast the revival of business, which speedily developed into a tremendous boom. In November, 1919, both speculative and business activity then being upon a very high level, money rates entered upon a rapid upward swing which quickly brought down the imposing edifice reared by speculation, and commodity prices. By the middle of some months later toppled over the equally imposing structure of inflated 1920 liquidation was well under way, and it continued until the trough of depression was reached, in about the normal time, in May or June, 1921.

By June of 1921 the conditions recorded on our index chart were such as to justify the belief that the worst was over and a gradual revival of industry was in prospect. But again there were many reasons, some of them entitled to serious consideration, why it could not be expected that a normal business cycle could develop out of the depression in which the industries of the country were so firmly gripped. Europe, our best customer, was in a state of chaos, the farmers were impoverished, commodity prices were still far above the pre-war level, and neither commodities nor labor could be considered fully liquidated. But, none the less, money rates having entered upon an abrupt decline, speculation lifted its head in August, 1921, in a manner that suggested that we were entering upon the first phase of another business cycle, namely, the phase of returning confidence, which under the influence of cheap

money leads to the revival of speculative activity. Of course, the recovery was at first slow and halting, and doubting Thomases pronounced it a mere "flash in the pan"; but it continued, none the less, until by spring of the present year it had developed into a bull market in stocks. About the middle of 1921—there is some doubt as to the exact date—business seems to have reached the trough of the depression, and thereafter it began, like speculation, to show signs of improvement which, like the first symptoms of the revival of speculation, were believed by many to be merely temporary in character, and, in fact, to be nothing more than a brief halt in the downward journey to the price level of 1913. Yet, in business as in speculation, gradual improvement continued, until by spring of the present year it became clearly evident that business had entered upon a characteristic upward swing, such as always follows an upward movement of speculation.

At the present moment, in spite of many and serious obstacles, business appears to be continuing the upward trend which is to be expected at this phase of the business cycle, which began in the early summer of 1921 and will probably require three or four years for its completion. The coal and the railroad strikes have retarded but not prevented the continuation of the upward movement which was well under way last spring and is clearly in evidence this fall in most lines of trade. European complications have doubtless reacted unfavorably upon conditions

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If you will answer just twenty-three questions for us we will estimate the fuel saving, decreased labor costs and increased production that you may expect from the Morehead Back-to-Boiler System. Write for the questions today.

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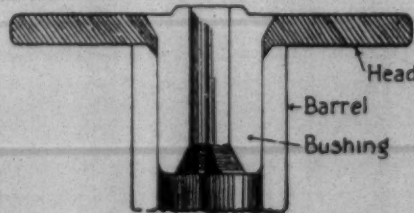
after fourteen years of the hardest mill use has demonstrated that it is

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Prompt deliveries in two to three weeks after receipt of order.

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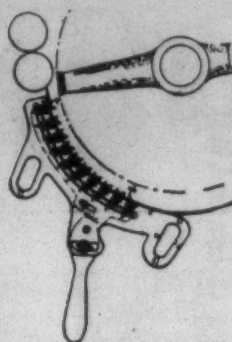


in this country, but they have not been sufficient to change the general movement. The present threat of another war has affected money rates and depressed security values, at least for the time being, and it may conceivably lead to developments that will upset all calculations. Our index of business conditions does not, and cannot, forecast wars or their ultimate consequences. But in September, 1922, the Harvard index recorded a normal cyclical movement of industry up out of the depression which held us in its grip until the summer of 1921. Evidently the great war did not destroy the old landmarks, or permanently change the relations that used to exist between speculation, business, and money, relations which have reasserted themselves since 1918 and afforded a basis for a reliable forecast of general business conditions since the armistice. The Great War did indeed destroy these relationships, and another war may not probably do so; but, barring such contingencies, the careful student of business cycles can appraise business conditions at any moment by practically the same methods that he would have followed before the war. This statement is indeed open to some exceptions on account of the profound changes that have taken place since 1914, but our experience in Cambridge fully justifies it so far as the fundamental factors governing the cyclical movement of industry are concerned.

In connection with the studies of business conditions which we have been making in Cambridge during the past four years, we have had an excellent opportunity to observe the reasons for the failure of many executives to make the right decision at the right time and adjust their policies to the movements of the business cycle. In the first place, executives frequently fail to reckon with all the factors in the business situation. Instead of seeking for all the facts, they often content themselves with such facts as come under their personal observation, current trade gossip, and the reports of their sales organizations. Information thus obtained may be adequate for most purposes and for most occasions, especially in a well organized concern which has had a long and successful history. But in these days it is coming to be realized that there is need of statistical or research departments, the sole function of which is the sys-

tematic and continuous collection and analysis of data, and all the data, upon which executive decisions ought to be based.

A second cause of mistaken business policies is that, even when all the pertinent facts are taken into account, their meaning may not be rightly appraised and their relations to each other may not be fully comprehended. Where there is a well-defined seasonal movement, an upward or downward turn in the crude statistics showing the actual movement for the preceding month may have little or may possess very great significance.



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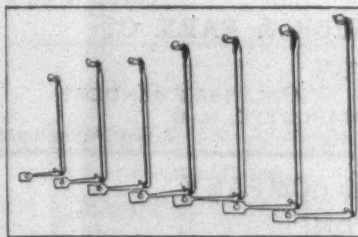
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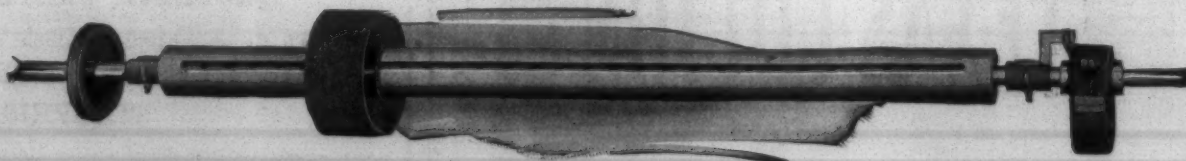


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Cotton Notes

The Week's Cotton Trade.

Further advances were again registered in cotton prices during the week ending November 3, both spots and futures reaching new high levels for the season with closing prices higher than reached at any time since October, 1920. Continued indifference on the part of holders of spot cotton to sell at present levels, and the strong tone in the dry goods markets were reported as the principal factors contributing to the continued advance. December future contracts at New York broke the 25 cent level, closing at 25.05c on November 3, as compared with 20.40c, the low price so far this season touched on September 30. This advance represents an increased value of \$23.25 per bale since that time.

The average quoted price for Middling in 10 southern spot markets was 24.50c per pound on November 3, as compared with 23.37c on October 27. Sales of spot cotton were not so large as compared with previous weeks, the total being 151,576 bales, as compared with 188,907 bales the previous week and 232,910 bales for the week ending October 20. Trade reports state that holders of spot cotton in the south were inclined to hold for much higher

levels, which was one of the causes of the lighter turn-over for the week.

Figures compiled by the Bureau of the Census of the Department of Commerce and the Bureau of Agricultural Economics of the Department of Agriculture, place the world's consumption of American cotton for the year ending July 31, 1922, at 12,239,000 bales and the estimated available supply of American cotton in America for the season 1922-1923, at 12,793,000 bales.

Exports of American cotton for the week ending November 3 were the largest for any single week for some time, amounting to 305,298 bales, compared with 129,868 bales the previous week and 162,799 bales for the corresponding week last year.

Certificated stock at New York on November 3 was 39,013 bales, and at New Orleans 75,538 bales. Total stocks all kinds at New York, 63,369 bales, and at New Orleans, 249,266 bales.

New York future contracts closed November 4: December 25.05, January 24.73, March 24.63, May 24.43, July 24.07; New Orleans closed: December 24.40, January 24.43, March 24.30, May 24.14, July 23.73. New Orleans spot cotton 24.25c per hundred.



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Have Been Making Satisfactory
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World Production of Commercial Cotton is 16,750,000 Bales.

Washington.—The world production of all kinds of commercial cotton for the current year will approach 16,750,000 bales according to figures compiled by the census bureau and made public. From present indications, a statement by the bureau adds, the world crop will be about the same as last year. American production for this year has been figures by the department of agriculture at 10,135,000 bales.

Consumption during the year, ending July 31 aggregated 20,047,000 bales of the world's supply according to the bureau's reports. The world stocks on hand on that date were given at 9,536,000 bales.

The bureau's reports showed the disposition of the probable world stocks July 31 as follows: In American mills, 1,220,000 bales; in public storage and elsewhere in the United States, 1,612,000 bales; in British mills and ports, 1,201,000 bales; at sea to Great Britain, 12,000 bales; in continental mills and ports, 1,828,000 bales; at sea to the continent, 211,000 bales; at Bombay and Alexandria, 1,137,000 bales, and in and to Canada, Japan and other countries, 2,506,000.

Bahia Brazil, 1921-22 Cotton Crop.

The Bahia cotton crop for the year 1921-22 amounted to 23,312 bales of 60 kilos each as compared with 15,898 bales for the preceding year, says Consul Bevan, Bahia. The entire crop was consumed by the Bahia factories with the exception of two small shipments of 402 bales to New York and 30 bales to Liver-

pool. In addition to the local crop the Bahia cotton manufacturers were forced to import from other Brazilian states 18,947 bales weighing 120 kilos each, to meet their requirements.

American Hosiery Preferred in Rio de Janeiro.

American hosiery is preferred in Rio de Janeiro on account of its superior quality when compared with that received from other countries. Imports of American knit goods have lately fallen off in this market as a result of unfavorable exchange conditions and it is doubted if any opening exists at the present time, according to a report from Consul General Gaulin, Rio de Janeiro.

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Cotton Goods

New York.—With raw cotton high and firm, cotton goods continued strong at the higher prices during the week, although the actual volume of sales showed some decline as the week ended. On many lines where prices have been below present costs, new quotations are being named. Chambrays, tickings, denims and other colored goods that have been priced below present cotton prices have been marked up and good sales have been made for future delivery on the new basis. A good many other lines are still under replacement costs and these sold very actively during the week. The price movement checked buying but where prices are still on the old basis, sales are large.

Gray goods showed new strength as the cotton market again advanced at the end of the week. Goods that had been offered by second hands at concessions were rapidly sold up and there was a renewed demand from some of the bag manufacturers.

Four-yard sheetings were quoted at 11c on bids, but several mills wanted 11 1-3c. Some trading at 11c was reported, at least 1,000,000 yards having been taken up. On 5.50s some mills sold at 8 3-4c, but it was possible to secure goods as low as 8 1-2c. On five-yard goods 9 1-2 was quoted by some mills, with sales made at 9 3-8c. Some houses quoted 13 1-2c net for three-yard goods.

Sateens continue strong. Some mills are sold ahead into February and will take no additional business at this time. For four-yard 64x112s 18 1-2c has been paid, for 39-inch 3.50s 21c and for 37 1-2-inch 5.25s 14c was paid.

While business in combed plain yarn cloths has not been as active as during the short time previous, mill asking prices are going up in a number of instances. An asking price of 14 1-2 was reported on 34-in. 64x72, 6.40 yard pongee and 17 cents asked for a certain make of 34-inch, 72x100, 7.00 yard—both of course, a

little over the current market. A quotation on 43-inch 76x104, 4.90 yard, at 24 cents, was reported.

A number of recent sales in voiles have been reported; with 40-inch, 60x52 ordinary hard twist sold at 15 cents, and at various prices all the way up to 16 cents, for the various makes.

One of the mystifying reports was that in connection with 35-inch, 96x100, 22-26 single end Cantons—which sold this week at 33, 33 1-2 and at 35 cents, for various lots.

Choice make of Eastern 37 1-2 in. 100x44, 3.90 carded poplin sold at 16 1-2 cents.

At Fall River there was a marked slackening of interest in wide goods during the week, yet the demand for 36 inch cloth increased with the result the estimated sales for the week are placed at 200,000 pieces.

Manufacturers continue very firm with regard to prices. Deliveries extend well into the first two months of the new year. Some styles show an eighth advance over last weeks' quotations.

Manufacturers in general feel the present quiet spell is temporary and that buyers will take on goods at the present quotations shortly. For that reason they refuse to recede from current quotations, and the strength of the market is apparent from the fact that buyers have made no effort to break prices as yet.

Prices were quoted as follows:

Print Cloths, 28-in., 64x64s....	8
Print Cloths, 28-in., 64x60s....	7½
Print Cloths, 27-in., 64x60s....	7½
Gray goods, 38 1-2 in., 64x64s....	10
Gray goods, 39-in., 68x72s....	10½
Gray goods, 39-in., 80x80s....	14
Brown sheetings, 3-yard....	14
Brown sheetings, 4-yard....	12
Brown sheetings, St. Snd....	15
Tickings, 8-ounce....	26
Denims, 2.20....	21½a21
Staple ginghams....	14½
Dress ginghams....	18a20½
Standard prints....	10½

American Hosiery and Underwear in Cuba.

Under normal conditions, Cuba furnishes a good market for American hosiery and underwear, but at present the market in textiles is over-stocked, as shown by the fact that dry goods to the value of \$732,538 have been returned to manufacturers in the United States during the first six months of 1922. Owing to the radical change in this market since 1920, it is advisable to procure now commercial ratings in almost every instance before opening business relations, says Consul General Hurst, Havana.

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The Yarn Market

Philadelphia, Pa.—Higher prices were the rule in the cotton yarn market last week, the advance in cotton being followed by a general marking up of the whole price list. The demand for yarn continued very strong and orders were heavy. While larger buyers have moved more cautiously they have placed very substantial orders. Many buyers are still seeking yarns on the price basis of two weeks ago, but they were bale to find only very small offerings in line with their price ideas.

Reports from the mercerizing trades indicate that the mills are very busy. Production is said to be very near capacity figures. Mercerizers bought yarn steadily throughout the week, although their orders were not unusually large. This business, however, covered a very wide range of both Southern and Eastern yarns. The market for tinged yarns also showed considerable active. Consumers of these yarns are said to have very small supplies on hand and stocks in the market are also very small.

Prices in this market were quoted as follows:

Southern Two-Ply Chain Warps, Etc.

10s	40	@
12s to 14s	41	@42
2-ply 16s	42	@43
2-ply 20s	43	@44
2-ply 24s	47	@
2-ply 26s	48	@49
2-ply 30s	52	@53
2-ply 40s	63	@65
2-ply 50s	78	@

Southern Two-Ply Skeins.

5s to 10s	35	@
10s to 12s	39	@
14s	41	@
16s	43	@
20s	45	@46
36s	59	@
40s	60	@
40s extra	67	@
50s	78	@
60s	88	@

Carpet—2, 3 and 4-ply	38	@
5-ply	38	@

6s, 1-ply	35	@
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8s, 2, 3 and 4-ply	37	@
10s, 1-ply and 2-ply	37½	@
12s, 2-ply	38	@
20s, 2-ply	39	@04
26s, 2-ply	43	@45
30s, 2-ply	45	@50

Duck Yarns.

3, 4 and 5-ply—	38	@
8s	39	@
10s	42½	@43
16s	45	@46

Southern Single Chain Warps.

6s to 10s	38	@
10s	39	@
14s	39	@
16s	40	@
20s	41	@
22s	42	@
24s	46	@
26s	47	@
30s	50	@52
40s	60	@62

Southern Single Skeins.

6s to 8s	36	@37
10s	37½	@
12s	38	@
14s	38½	@

Southern Frame Cones.

8s	38	@
12s	38½	@
14s	39	@
16s	40	@
18s	41	@
20s	41½	@
22s	42	@43
24s	43	@45
26s	44	@46
30s	47	@
30s double carded	48	@
30s tying in	45	@56

Southern Combed Peeler Skeins, Etc.

2-ply 30s	60	@
2-ply 36s	70	@
2-ply 40s	72½	@90
2-ply 50s	85	@90
2-ply 60s	95	@1 00
2-ply 70s	1 10	@1 15
2-ply 80s	1 25	@1 30

Combed Peeler Cones.

10s	49½	@
12s	50	@
14s	50½	@
16s	51	@
18s	52	@
20s	53	@
22s	54	@
24s	55	@
26s	56	@
30s	62	@
32s	64	@
34s	66	@
36s	68	@
40s	75	@
50s	85	@
60s	1 05	@

Eastern Carded Peeler Thread Twist Skeins.

20s, 2-ply	48	@
22s, 2-ply	49	@
24s, 2-ply	50	@
30s, 2-ply	56	@
36s, 2-ply	64	@

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Twist

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Salesman to work out of Greenville covering part of South Carolina for an old-established nationally known manufacturer of mill supply specialties.

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WANT position as superintendent in mill requiring services of thoroughly competent man, on yarn or cloth. Married, temperate, hard worker and economical, can secure results. Over 10 years as superintendent of best mills. Best of references. Address No. 3648.

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WANT position as carder, or would take second hand in large room. Good man who thoroughly understands card room in every particular. Address No. 3652.

WANT position as superintendent of medium sized mill, weave plant preferred, or assistant superintendent in large mill. Competent to handle either place. Good references. Address No. 3653.

WANT position as carder and spinner, or both. Long practical experience, good manager of help, excellent references. Address No. 3654.

WANT position as superintendent, carder or spinning. Now employed in first class mill, but want larger job. Excellent references. Address No. 3655.

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WANT position as master mechanic or electrician. Long experience in large mill shops, can handle either steam or electric plant. Good references. Address No. 3657.

WANT position as superintendent of medium sized mill, or as assistant superintendent or weaver in large mill, either plain or fancy work. Good references as to character and ability. Address No. 3658.

WANT position as superintendent or overseer weaving. Experienced on plain and fancy goods, know how to get quality production at low cost. Good references. Address No. 3659.

WANT position as assistant superintendent or overseer weaving. Now employed as weaver in room having 784 looms, with dobby heads on 448 of them. Age 35, long experience as loom fixer, second hand and assistant superintendent. Familiar with plain and drill goods, pajama checks, shirting, skirting, sateen, gabardine, marquisettes and other goods woven on plain and dobby looms. I. C. S. graduate. Best of references. Address No. 3660.

WANT position as superintendent or overseer spinning. Good man of long experience who can successfully handle your mill or spinning room. Address No. 3661.

WANT position as superintendent. Long experience as such in number of large mills in South and can give good references showing ability and character. Address No. 3662.

WANT position as carder or spinner on

white work only. Long experience and can get results. Address No. 3663.

WANT position as superintendent, carder or spinner. Have had long experience as both superintendent and overseer and can show excellent record and qualifications. Fine references. Address No. 3664.

WANT position as overseer weaving. Experienced on wide variety of fabrics and am first class weaver in every respect. Good references. Address No. 3665.

WANT position as carder or spinner, or both. Now giving satisfaction in good mill, but want larger job. Address No. 3666.

WANTED—Clerical position by married man, four years' mill work. Competent for paymaster or buyer of supplies. Thoroughly familiar with general office work. Address 3667.

WANT position as overseer weaving. Now employed, but wish larger place. Familiar with wide variety of fabrics and can give references to show character and past record. Address No. 3668.

WANT position as superintendent. Have successfully handled during past six years one of the best mills in the South. Have excellent reasons for making a change. Wish to correspond with mill needing high class man, who is thoroughly competent to take entire charge of mill. Address No. 3669.

WANT position as card room overseer or master mechanic, or both in small mill. Can furnish excellent references as to character and ability. Address No. 3670.

WANT position as superintendent. Long experience as superintendent and am capable, practical man who has always gotten results. Good references to show excellent past record. Address No. 3671.

WANT position as roller coverer. Long experience in this work enables me to take charge of your shop and do your work efficiently. Fine references. Address No. 3672.

WANT position as overseer weaving. Now have night job, but wish day run. Twenty-six years experience as weaver, 11 years as overseer. Can handle help well. Prefer job with Draper looms. Good references. Address No. 3673.

WANT position as superintendent or would take carding and spinning. Textile college graduate, long practical experience in good mills. Excellent references. Address No. 3674.

WANT position, any size mill, as overseer carding and spinning. Colored or white work. Several years' experience as overhauler of carding, spinning and weaving. A-1 references. Address No. 3675.

WANT position as superintendent or general manager. Many years' experience in both positions. Am thoroughly qualified to handle mill on efficient basis. Best of references. Address No. 3676.

WANT position as superintendent of small yarn mill or weaving plant, or overseer weaving. Married, age 39. Good references. Address No. 3677.

WANT position as overseer cloth room. Have had 15 years' experience as overseer in South Carolina and can furnish best of references. Can come on short notice. Address No. 3678.

WANT position as superintendent of overseer spinning. Long experience on both jobs and can show excellent record. Can come on short notice. Address No. 3679.

WANT position as superintendent of yarn mill, or would take overseer carding. Have been overseer for long term of years and thoroughly understand my business. Good references. Address No. 3680.

WANT position as overseer weaving. Experienced on fancy colored goods, sheetings, drills, can handle either Draper or Crompton and Knowles looms. Age 47, have family. Best of references. Have been in weave room 39 years, 18 years as overseer. Address No. 3781.

WANT position as overseer carding. Hard working, competent man, who has had necessary experience to handle card room on efficient basis. References. Address No. 3782.

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WANT position as overseer weaving. Plain goods preferred. Capable, experienced man with excellent record. Good references. Address No. 3684.

WANT position as superintendent, weaver or spinner. Long practical experience in number of good mills. Now employed,

but can change on short notice. Best of references. Address No. 3685.

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WANT position as superintendent or carder and spinner. Am thorough and practical man and can handle anything in the mill. Have handled some of best mills in South. Now employed, but want better equipped plant. Address No. 3690.

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WANT position as master mechanic and chief electrician. Eight years' practical experience in various mills and power companies and can handle any trouble that comes up in my department. Excellent references. Address No. 3693.

WANT position as superintendent, carder or spinner. Capable, experienced man of long mill experience and am specialist in carding and spinning. References. Address No. 3694.

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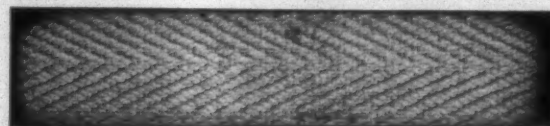
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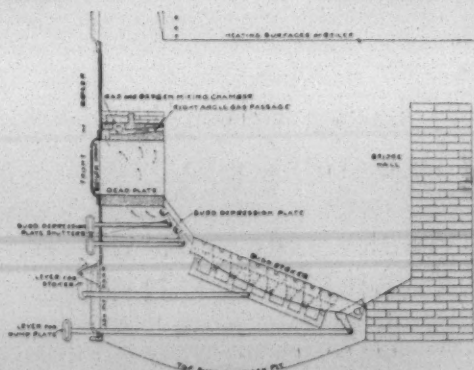
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